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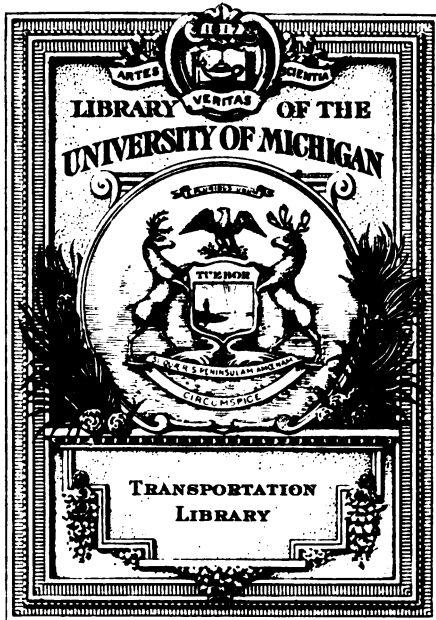
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DOCUMENTS,

ACCOMPANYING THE

Report of the Committee,

ON

Roads, Bridges and Inland Navigation,

READ IN THE

SENATE OF PENNSYLVANIA,

ON THE 23D OF MARCH, 1822.

C. Mowry, Printer,—Harrisburg.

Pennsylvania. General assembly.
Senate. Committee on roads,
bridges and inland navigation

Transportation
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1822

city book auction
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DOCUMENTS.

The following circular was addressed to the several Presidents and managers of turnpike road, bridge and inland navigation companies in the commonwealth of Pennsylvania.

To the President and Managers of the
Company.

Harrisburg, February 6, 1823.

GENTLEMEN,

On the 4th ultimo, two Resolutions passed the Senate of Pennsylvania, in the words following, to wit :

Resolved, That the committee on roads, bridges and inland navigation, be instructed to ascertain, as far as is practicable, and report to the Senate, a list of the turnpike road companies, incorporated by the Legislature of Pennsylvania, the amount of the state's subscription to each, the number of miles of each already completed, the counties in which located, the expenses of constructing the same, the nature, width, and depth of the materials of which they are composed, together with such information, relative to the improvements which have been made in the mode and economy of constructing turnpike roads, as will, in their opinion, be useful to the legislature.

"Resolved, That the same committee also be instructed to ascertain, as far as is practicable, and report to the Senate, a list of the bridge, canal and lock navigation companies, incorporated by the legislature, the amount of the state's subscription to each ; the costs of and progress made in constructing the same, together with such other information, relative to the subject of roads, bridges and inland navigation, as may present a complete view of the actual extent of internal improvement."

As it is impossible to collect the information called for, by the preceding resolutions, without the aid of the officers of the respective companies referred to, I have been instructed, by the committee upon which this inquiry has devolved, to address a circular letter to the President and Managers of each corporation, with a respectful request, that they would furnish the desired information, as far as they can do it with *convenience*. An entire view of the actual extent of our internal improvements is highly desirable at this moment. No official document, in relation to the subject, any where exists ; nor is it known in one part of the state, what improvements have been made in another. It must be evident, that a

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general dissemination of knowledge, upon a matter so intimately connected with the prosperity of our state, would be productive of the most beneficial results ; and the committee relies with confidence upon the public spirit of those who alone have the power to assist them in their inquiries.

Annexed you will find a series of questions, with intermediate blanks, sufficiently large to contain the requisite answers, which the committee will thank you to transmit *by mail* as early as possible.

Should you be disposed to communicate any further information upon this subject, it will be gratefully received by the committee, who are desirous of submitting to the public, a mass of facts, which may serve as a guide to the Legislature, when called upon for future charters and appropriations ; and as a document in which the people may see what great works have resulted from individual enterprise and public liberality.

I have the honor to be,

Gentlemen,

Your obedient servant,

CONDY RAGUET, *Chairman.*

QUESTIONS,

Submitted to the President and Managers of the

Road Company.

1. What is the extent, in miles, of the road contemplated by your charter of incorporation ?
2. At what place and in what county does it commence ?
3. At what place and in what county does it terminate ?
4. Through what towns, and over what large streams or hills does it pass ?
5. In what year was the construction of the road commenced ?
6. In what year was it completed ?
7. If it is not yet *entirely* completed, how many miles are completed ?
8. Within what time is it expected, that the residue will be finished ?
9. At what particular points on the road, are the unfinished spaces ?
10. What was the capital stock of the company, authorized by law ?
11. What was the original price and number of the shares ?
12. What was the actual amount subscribed and paid, or expected to be paid, by individuals and companies ?
13. How much was subscribed by the state ?

14. What was the average cost *per mile*, of constructing this road, as far as it has been completed ?

15. At what rate per mile, have contracts been made, for the part which remains to be completed ?

16. If no contracts have been made, at what rate per mile, is it probable they could be made ?

17. Of what description of *materials* is the road composed ?

18. If of stone, what is the size of a ring through which the general mass of the pieces would pass ?

19. What is the width of the road covered with materials ?

20. What is the depth of the materials in the centre, and at the sides, respectively ?

21. Is the road flat or convex ? If the latter, how much higher is it in the centre than at the sides ?

22. What is the rate of tolls *per mile*, for

a loaded wagon with broad wheels and four horses ?

a loaded wagon with narrow wheels and four horses ?

a pleasure carriage with two horses ?

a single man and horse ?

23. At what distance from each other, upon an average, are gates erected ?

24. How many managers conduct the affairs of the company, and is the number too great ?

25. What has been the average amount of tolls received per annum, since the first erection of gates ?

26. What has been the average amount of tolls received, per annum, during the last three years ?

27. What annual dividends have been made upon an average, since the road was commenced ?

28. What annual dividends have been made upon an average during the last three years ?

29. What is the amount of the existing debts of the company, if any ?

30. What is the present market price of the stock ?

31. Is your road liable to be much cut up by wagons, and at what seasons of the year ?

32. Is it a smooth or rough road, and does it pass over a level or a hilly country ?

33. Is the foundation upon which the road rests, generally hard or soft ?

34. What are the prominent advantages derived by your neighbourhood, and by the state at large, from your road ?

35. Where is the principal market for the agricultural produce which is raised in the vicinity of your road, and by what route does it pass ?

36. Has there been a sensible increase of population and improvement, in the vicinity of your road, since your road was commenced ?

37. At what place is the business of your company conducted, and who is the present President, and where does he reside ?

38. Do you consider the advantages to a turnpike road from

the use of broad wheeled wagons, to be sufficiently great to entitle them to exemption from tolls?

39. If not, what is the fair difference which ought to be made between them and narrow wheeled wagons, carrying the same weight?

40. What form of a road, whether flat or convex, is in your opinion the most durable?

41. If convex, how much higher ought it to be in the centre than at the sides?

42. What is the proper depth for the materials of a road, to protect them from being cut through by loaded wagons?

43. What is the greatest load which can be transported over such a road as yours, upon broad and narrow wheels respectively, without injuring it?

44. What is the best size or weight for the pieces of stone of which a road should be constructed?

45. Were the materials of which your road is constructed, near at hand, or at what distance were they procured?

46. What was the price of turnpike labourers' wages per day, when your road was commenced, and during the last year?

47. Is the present comparative cheapness of road-making occasioned solely by a fall in the price of wages and materials, or partly by improvements in the skill and economy of applying labor and materials?

48. If the latter, in what do these improvements consist?

The following Answers have been received to the foregoing Questions :

From the Anderson's Ferry, Waterford and New-Haven Turnpike Road Company.

1. Extent, thirteen miles.
2. Commences at Anderson's Ferry, in Lancaster county.
3. Terminates at the city of Lancaster.
4. Passes through one small village called Hempfield, and over Chickesalungo and little Conestoga creeks.
5. Begun in the autumn of eighteen hundred and eleven.
6. Completed in December, one thousand eight hundred and thirteen.
10. Capital stock—Three hundred and fifty shares, but extended by the managers to six hundred.
11. Price and number of shares. Price one hundred dollars.
12. Private subscription,—396 shares, and expected to have been paid.
13. State subscription—100 shares, in A. D. 1821.
14. Cost, \$3,969 21 per mile, including bridges.
17. Materials—Limestone and slate.
18. Size of stones—about three inches.
19. Width—twenty-one feet.

20. Depth of materials ? Twelve inches in the centre, and nine inches at the sides.

21. Shape of the road ? Convex, and generally about nine inches higher in the centre than in the sides.

22. Rate of tolls per mile—a loaded wagon, with broad wheels and four horses, three and one third cents : a loaded wagon, with narrow wheels and four horses, six cents and two thirds : a pleasure carriage, with two horses, three and one third cents : a man and horse—one cent.

23. Distance of gates apart ? There are two gates, eight miles apart.

24. Number of managers ? Eight managers—the number is not too great.

25. Average of tolls, since the erection of gates ? \$1841; and the expense per annum for keeping the road in repair and paying toll gatherers, has been \$ 998 00.

26. Average tolls for three years.—\$1619 00.

29. Debts—\$10,000.

30. Market price of stock—no sales.

31. Road liable to be cut up ? In some parts in the spring of the year, when the frost leaves the ground.

32. Quality of road ? Rather rough and over a hilly country.

33. Foundation of road. Generally hard.

34. Prominent advantages to the neighbourhood ? A sure and safe route for the transportation of the agricultural produce, at all seasons of the year.

35. Principal markets ? Philadelphia, by the turnpike routes.

36. Benefits resulting ? There has been a sensible increase of population and improvement, in the vicinity of the road, since its commencement.

37. Where place of business and who the President ? In the borough of Marietta ; Henry Cassel is President, and resides in said borough.

38. Should broad wheels go free ? Certainly not.

39. If not, what exemption ? About $\frac{1}{2}$ unless much broader than those generally used.

40. Best form of a road ? convex.

41. Greatest height of centre above the sides—at least nine inches.

42. Proper depth for materials ? Not less than fifteen inches on a good foundation.

43. Greatest safe load ? It will depend upon the season of the year.

44. Best size or weight of stones ? It will depend greatly upon the foundation.

45. Were materials near or distant ? Near at hand.

46. Wages of turnpike labourers ? Not less than one dollar per day.

47. Causes of the present cheapness of road making ?—Occasioned partly by the fall in the price of wages and materials, and partly by the improvements in the skill and economy of applying labour and materials.

Armstrong and Indiana Turnpike Road Company.

1. Extent ? The direct line between the extreme points, is twenty-three miles and one hundred perches long. Not more than seven miles of the contemplated road has been located ; the charter of incorporation having been obtained only in October last. From their experience in the location of this part, the managers believe that the whole extent of turnpike will not exceed twenty four miles.

2. Commences, at the west end of the borough of Indiana, in Indiana county.

3. Terminates at the borough of Kittanning, in Armstrong county.

4. Passes ? It will pass through no towns. The intervening country is composed of a succession of hills, frequently abrupt and precipitous, and generally exceeding in height the diameter of their basis.

The road will cross Plumb and Crooked creeks, which will require bridges of some magnitude.

8. When completion expected ? It is confidently expected by the managers, that the road will be completed before the close of the current year.

10. Capital stock, price and number of shares ?

The act entitled " A supplement to an act entitled " An act authorising the governor to incorporate the president and managers of the Armstrong, Indiana and Cambria turnpike road company," passed the 27th March, 1819, divided the original company into two, and authorised the governor to incorporate them, on the subscription of 500 shares to each, at \$25 a share.

12. Private subscriptions ? The full amount of 500 shares has been subscribed by individuals.

13. State subscription ? By the 62d section of the " Act for the improvement of the state," passed the last session, the governor is authorised to subscribe, on behalf of the state, the sum of \$9000, on the usual terms.

16. Contracts could be made ? No contracts have been made ; but it is expected by the managers, predicated their opinion upon the terms on which the contract for the construction of the Indiana and Ebensburg road has recently been made, that the cost will not exceed five hundred dollars per mile.

24. Number of managers ? A President, twelve managers, a secretary and treasurer, conduct the affairs of the company. It is generally agreed that the number of managers is too great, and that business would be conducted with more promptness and energy, and with equal justice to the company and the public, by reducing it one half.

34. Prominent advantages ? The prominent advantages expected from this road, and which already begin to be felt, in anticipation, by the country through which it will pass, are such as have generally been experienced in other parts of the state, from similar enterprises.

The opening of a valuable region to the industry of the Agriculturalist ; the facilitating the transportation of the products of the soil to their proper market—the means it will afford to parts yet more remote of access, to the interior and more populous counties for the supply of the wants peculiarly incident to a country of recent settlement, and the reciprocal benefits conferred upon all, by the mutual interchange of their commodities. The salt, the flax, the hemp, &c. of the west, for the iron and manufactured articles of the interior and eastern counties.

On the extension of cultivation, the general increase of population, of improvements and of civilization of all and each of its parts, a state must depend for its wealth, its power and its universal prosperity.

37. Where place of business and who President? At the borough of Kittanning, Armstrong county, at which place the President, Thomas Blair, Esq. resides.

47. Causes of the present cheapness of road making?

The present comparative cheapness of road making, is attributed to the general scarcity of money, and consequent fall of wages ; and also, to the great improvements which have recently been introduced in the application of labour.

Belmont and Ochquaga Turnpike.

1. Extent. Eighteen miles.

2. Commences at Bellefonte.

3. Terminates at the Susquehanna river, near Ochquaga.

4. Passes through the townships of Mount Pleasant and Buckingham, in Wayne county, and the townships of Jackson and Harmony, in Susquehanna county. It passes round the northern point of mount Arrarat, the highest point on the Moosic mountain, the dividing ridge between the waters of the Delaware and Susquehanna. The streams are small.

5. Begun? In the year 1821.

6. Completed? It is not yet completed.

7. Proportion completed? No part completed—eleven miles under contract.

8. When completion expected? Eleven miles will be finished this year; the residue, we hope, in 1823.

10. Capital Stock? \$20,000.

11. Price and number of shares? 400 shares at \$50 per share.

12. Private subscriptions? About \$7000.

13. State subscriptions? \$5000.

15. Contracts made? About \$900 per mile.

16. Contracts could be made? At \$900 per mile.

17. Materials? Earth thrown up and shaped.

18. Size of stones? 2½ inches.

19. Width? The carriage way is twenty feet, rising fifteen inches in the centre.

20. Depth of materials? Six inches.

21. Shape of Road? 15 inches higher in the centre than at the sides.

22. Rate of tolls? Per five miles, a loaded waggon and four horses, 1 to 3 cents, for each horse, where the wheels exceed four inches. A loaded waggon, with narrow wheels and four horses, 20 cents. A pleasure carriage, with two horses, 20 cents. A man and horse, 3 cents.

24. Number of managers? A president and twelve managers—eight would answer every purpose, and decrease the expense.

31. Road liable to be cut up? Roads not covered with stone are not calculated for the heaviest loads—they are liable to be cut up early in the spring and late in the fall.

32. Quality of road? It will be a smooth road and not hilly, when compared with the other roads through our country.

33. Foundation of road? Hard

34. Prominent advantages? It opens with the Susquehanna and its branches, with Utica, Sackets Harbour, Cooperstown, &c. the most direct road. It is calculated to lead to the city of Philadelphia, all the cattle trade of the state of New-York, from Ontario to Salina on the west, and Schoharrie on the east. It enables us to get our salt easily from Salina.

35. Principal market? Our trade at present is with New-Burg and New-York; but the greater part may be easily turned to Easton and Philadelphia.

36. Benefits resulting? Turnpike roads increase the population in a wonderful degree.

37. Where place of business and who President? At Belmont. Thomas Mumford, Esq. President.

38. Should broad wheels go free? Not in our country.

39. If not what exemption? I am inclined to believe that the law as it now stands, cannot be improved.

40. Best form of a road? Convex in our county.

41. Greater height of centre above the sides? About 15 inches.

42. Proper depth for materials? About 6 inches of hard pan, gravel, or solid compact earth.

43. Greatest safe load? About 40 cwt. with narrow wheels.

44. Best size or weight of stones? Such as will pass through a ring 2½ inches in diameter, in every direction.

45. Were materials near at hand? Yes.

46. Wages of turnpike labourers? from \$10 to \$12 per month, according to the skill of the hands.

47. Causes of the present cheapness of road making? } Occasioned partly by a fall in the price of labour, and partly by improvements in the skill and economy of applying labour and materials.

48. Improvements in road making? Consist principally in the skilful application of the customary tools.

Bedford and Stoystown Turnpike.

1. Extent? The section is twenty eight miles and 208 perches; measured December 10th, 1819, after the whole was completed.

2. Commences? In the centre of Bedford in Bedford county.

3. Terminates? Westwardly, to the centre of Stoystown, Somerset county.

4. Passes? Through Schellsburg, over Raystown branch of the Juniata and the heads of Stony creek; over Dollshill, Mile hill, Chesnut ridge and the Allegany mountains.

5. Begun? October 22d, 1815, first contract.

6. Completed? In the year 1818, December 22d, 3 (years and two months.)

7. Proportion completed? All completed.

10. Capital stock? Five hundred shares.

11. Price and number of shares? \$50 per share,—the number was 540.

12. Private subscriptions? 888 shares have paid \$39,342—expected to be paid, \$1,058, amounting to \$40,400. Balance supposed to be lost \$1,500.

13. State subscription? \$104,000, being 2080 shares, at \$50 per share.

14. Cost? The average cost per mile, about \$6,211 20, including bridges, without taking into view the expense of the managers.

15. Contracts? Completed.

17. Materials? The greater part mountain stone, a portion lime stone, and a small part of hard slate stone, all gravelled.

18. Size of stones? On the surface for six inches, the general mass of stone would pass through a three inch ring, the remainder through a six inch ring.

19. Width? Twenty two feet.

20. Depth of materials? Fifteen inches at the centre, and twelve inches at the sides.

21. Shape of road? It is convex—three inches high in the centre.

22. Rate of tolls? A loaded wagon, with broad wheels and 4 horses, twelve cents for every five miles, 4 inch tire. A loaded wagon, with narrow wheels and 4 horses, 16 cents for every five miles, 2 inch tire. A pleasure carriage, with two horses, 12½ cts. for every 5 miles. A man and horse, three cents for every five miles.

23. Distance of gates apart? Nine and a half miles average; three gates.

24. Number of managers? Six—not too great a number.

25. Average tolls, since erection of gates? \$6,386 64 per year, for four years, up to the 26th November, 1821.

26. Average tolls for three years? In 1819, tolls received \$3,442 78; in 1820, tolls, \$5,641 45; in 1821, tolls, \$4,617 17; average \$6,233 80.

27. Annual dividend, since road commenced? On the 5th of June, 1818, a dividend of 4 per centum, for six months, was declared on the stock then paid in, since then, no dividend has been declared.

29. Debts? \$30,339 09, at the settlement in November last.

30. Market price of stock? Owing to the scarcity of money, there is no sale for stock at present.

31. Road liable to be cut up? One tenth part is liable to be cut up in the spring of the year.

32. Quality of road? A tolerably smooth road, but passes over a hilly country.

33. Foundation of road? Generally hard.

34. Prominent advantages? It has created flourishing villages, improved the vicinity and reduce the price of taking produce to market one half; and thereby increased the cultivation of the soil. It has secured and retained within the state, a portion of the travelling and transportation to the western states, which would have entirely been taken from us, by means of the national road in Maryland, and the improvements in New-York, if our roads had not been finished.

35. Principal market? About one half of our produce is consumed by travellers along the road; the remainder is chiefly carried to Baltimore, by the way of Gettysburg or down the river Juniata; but as soon as the communication by water is opened, between Philadelphia and the Susquehanna river, it will be chiefly carried to Philadelphia.

36. Benefits resulting? A very considerable increase of population. Large taverns are now erected where there was formerly nothing but a wilderness, and other great improvements made.

37. Where place of business and who President? The meetings of the company are generally held at Schellsburg. John Schell, Esq. has been the president six years, and resides in Bedford.

38. Should broad wheels go free? Yes, if six inches broad, and the back wheels so constructed as to cover only one half of the track of the front ones.

39. If not what exemption? If constructed as at present, there ought to be a difference of one half—4 inch wheels.

40. Best form of a road? Convex.

41. Greater height of centre above the sides? Three inches.

42. Proper depth for materials? 18 inches in the centre, 12 inches at the sides, all the stone to pass through a three inch ring.

43. Greatest safe load? Broad wheels might carry 60 hundred; narrow wheels thirty hundred, without injuring the road.

44. Best size or weight of stones? There are different opinions—perhaps a stone that would pass through a three inch ring, would be the best adapted to the means of the country.

45. Were materials near or distant? Generally near at hand, the farthest were from a mile to a mile and a half.

46. Wages of turnpike labourers? When the road commen-

ced, from one dollar to one and a quarter, when they found themselves, and so on till the whole was finished.

47. Causes of the present cheapness of road making? It is occasioned, in a small degree, by the greater experience of the managers and contractors; but chiefly by a fall in the price of wages, occasioned by the fall of produce.

Bellefonte and Philipsburg Turnpike Road Company.

1. Extent? 28½ miles; the exact distance, though, not ascertained.

2. Commences? At the borough of Bellefonte, the county town of Centre county.

3. Terminates? At Philipsburg, on the west side of the Allegheny mountains, in the said county.

4. Passes? Through Milesburg, crosses the Bald-Eagle creek and the Allegheny mountain.

5. Begun? The whole distance was sold in sections at public vendue, in December, 1820; and nearly completed last fall. It is expected to be completely finished early in the next season. Some of the sections are completely finished, and all nearly so; and eight bridges, with substantial stone abutments and piers over the streams on the route of the road, are constructed.

10. Capital stock? \$12,500. See Sect. 6 of the act of the 29 March, 1819.

22 Price and number of shares? \$50.

12. Private subscriptions? The amount subscribed is 250 shares; the amount already called, paid and required to be paid, on each share, is \$20; and further calls will be necessary.

13. State subscriptions? 400 shares, subject to a deduction of 5 per cent. for building a bridge over the Susquehanna river.

16. Contracts could be made? Where made of stone, at \$1280 per mile, besides bridging and contingences. Of gravel and hard substances, \$757 per mile, besides bridges, when the span exceeds twenty feet, and the expenses of superintending, &c.

17 Materials? }

18. Size of stones? }

19. Width? }

20. Depth of materials? }

21. Shape of road.

By law, we were bound to make an artificial road of the breadth of 20 feet. Where our road passes over limestone land, it is composed of pounded stone, that will pass through a three inch ring. The vegetable soil is removed, and the stone placed on an even surface, twenty feet wide, twelve inches deep in the centre, and nine inches at the edges, this makes the road convex, and is believed to be better than an even surface; the stones are then covered about three inches, with the best gravel or clay that can be had adjacent to the road.

As the greater part of a road passes over slate land and mountains, a clay road, as it is generally termed, was deemed for many reasons, better than a stone road; which is formed in the following manner: The ground is completely opened sixty feet wide, all the trees, brush, stumps, large stones, roots and soft vegetable substance, to the distance of fifteen feet on each side, from the centre, is completely removed; and when a deep strata of vegetable soil covers the surface, this is also removed. The artificial road is composed of clay and gravel, raised in the form of an arch, with a smooth and even surface of two feet perpendicular height in the centre; ditches are then formed on each side of the road, two feet deeper than the bed of the road, unless on high and dry ground, where it is dispensed with by the board of managers. The road forms a regular convex surface. The width is thirty feet from the outer bank of each ditch. A road twenty-four feet wide is thus formed: when it is found necessary to causeway with timber, that used is of the most durable kind, of the length of 18 feet, and not less than 12 inches in diameter, and completely covered with earth or gravel. The earth or gravel is thrown up at each side, so as to form a solid covering of two feet in the centre and nine inches at the end of the logs. The timber is laid flat on the ground, level on the top, and in contact with each other. Substantial sewers or pipes are formed where necessary, to draw the water from the ditches. In general, the cavity is from 10 to 12 inches, and when necessary, much larger, but in no instance, smaller. These are placed frequently diagonally across the road, so as to insure a sufficient fall, and to guard against their being filled with mud, sand and sticks. These sewers are made of stone, when convenient; and if not convenient, of hewed timber, lined and flattened on three sides, with heavy braces, morticed on the top, so as to secure the distance assunder, and covered with one log, hewn on two sides, so large as to rest on the lower timber throughout. The covering timber is secured by stones; and the whole completely covered with gravel.

In digging on the side of steep hills and mountains, it is required that the breadth of the artificial road be 23 feet, including a ditch on the upper side, two feet wide, and from six to twelve inches deep. The road is sloped towards the hill, in the proportion of one inch to every foot and a half, with sewers under the road, at every fifty yards, if necessary; and to extend so as to convey the water outside of the 60 feet. The hill side to be sloped so as to prevent caving. The workmen were permitted to dig so far into the hill as to secure twenty three feet of solid ground or to build on the lower side, substantial stone walls, inclining inwards three inches to the foot.

The smaller class of runs are bridged by substantial stone abutments, with wings extending into the bank, with large sills laid thereon, covered with oak plank, of three inches in thickness; or hewn pine plank of five inches, with substantial side rails.

22. Rate of tolls? See act of 1812.

24. Number of managers? A president and 12 managers.—The number is not too great.

29. Debts? Are \$6000. Our principal debt is in the Centre Bank; our contracts were one fourth when the work was half done, and the residue when the road was completed.

30. Market price of stocks? No sales.

31. Road liable to be cut up? }

32. Quality of road? }

33. Foundation of road? }

The foundation of our road is admirably adapted for a road formed in the manner before mentioned. After it leaves the Bald-Eagle valley, it passes over the Allegheny mountain at a regular ascent of $4\frac{1}{2}$ degrees, until it reaches the summit; thence it passes along the top of a high, dry ridge, which divides the waters of the Bald-Eagle and Beech creek, until we begin to descend the western side of the mountain. It is difficult to say where the mountain terminates, and the road is admirably laid along the tops and sides of ridges, until within a short distance of Philipsburg. The foundation is generally solid, and it is believed, will answer better for this country than if the road were made in the usual way of those in the eastern section of the state. Beyond all question, for more than ten months in the year, the road will be finer than the Philadelphia and Lancaster turnpike. Add to this, the ease with which it will be repaired; the saving in tear and destruction of waggons, and the advantages to the feet of horses, we do with the utmost confidence, state, that it is the very best species of road that could be constructed for this part of the state.

34. Prominent advantages? The Bellefonte and Philipsburg turnpike road is a section of the turnpike road from Philadelphia to lake Erie, through Reading, Sunbury, Northumberland, Bellefonte, Franklin and Meadville, to Erie; and will also be a section of the turnpike road from Philadelphia, Harrisburg, Lewistown and Bellefonte; and from thence to Erie. It is believed, that when the road is completed, its advantages will be of the first importance to the northern and central parts of the state, and to the city of Philadelphia; and in a national point of view, it will strike the most common observer, as a road of vast importance and utility, affording a safe and good road from the cities on the seaboard to the lakes.

35. Principal market? Philadelphia and Baltimore—by the Bald-Eagle creek, which affords a safe and excellent navigation from Milesburg to the west branch of the river Susquehanna, for arks of from 30 to 35 tons burthen, by the Juniata from Lewistown, by Penns creek, from Duncans mills, in Penns Valley, and by the West branch, from Lewisburg. Bar iron, of the first quality; pig metal and castings, of various denominations; wheat in large quantities; other grain, whiskey, gin, clover-seed, flax-seed, bees-wax, butter et cetera, are wagoned to these points, and others on the streams before mentioned, and taken down the Susquehanna. A part is transported in wagons from Columbia to Philadelphia; and a part taken by water to Baltimore and elsewhere, to the best market that can be had; but if it were not for the expense of transportation, from the Susquehanna to Philadelphia, the market of

Philadelphia would be preferred to all others, as being the most regular, and commanding the highest prices.

Pittsburg has recently been the principal market for our iron; and by our turnpike, the cheapest route of carriage, is from the neighborhood of Bellefonte, by sleds in the winter, to Sandy Lick creek, and thence on rafts to the Allegheny river.

We have already experienced the good effects of the Erie turnpike. We have had sleds from the country west of the Allegheny river, and even from Erie, loaded with the white fish of the lake, offering them in exchange for bar iron and castings.

36. Benefits resulting? The increase of population in the immediate vicinity of our road, has as yet not been extensive. A part of the country is not susceptible of cultivation, through which it passes, particularly the summit of the Allegheny mountain.

It is the country, after you pass the summit of the Allegheny mountain, and east to the Susquehanna river and Philipsburg, and between the Susquehanna river and the Allegheny, that will be increased in population by the completion of the whole route. The effect is already visible, and it is believed, that in a very few years, that vast extent of territory, laying between the Allegheny mountain and the state of Ohio and the lakes, will be changed from "a dreary wilderness to a fruitful field." Numbers have already commenced settlements from the states of New-York and Connecticut, and many from other places,

37. Where place of business and who president? The business is conducted at Bellefonte. Thomas Burnside is the present president and has been since the organization of the company.— He resides in Bellefonte.

38. Should broad wheels go free? If the tire were seven inches broad, it is believed that the advantage to the road would be so great as to exempt them from toll.

39. If not, what exemption? Waggon of four inches, should only pay half toll, and in proportion to seven inches, which should be exempted.

40. Best form of a road? A clay road should be convex, and well thrown up.

42. Proper depth of materials? This will depend on the materials. Gravel forms the best materials for a road, from 12 to 24 inches in the centre, and sufficiently convex to prevent water from laying thereon.

43. Greatest safe load? On broad wheels, 10 tons if you please. Narrow wheels, three tons.

44. Best size or weight of stones? The stones are seldom broke sufficiently small; they cannot be broken too fine

45. Were materials near or distant? Our materials were abundant and very convenient. Stone and timber abound in this part of the state.

46. Wages of turnpike laborers? From 8 to 12 dollars per month.

47. Causes of the present cheapness of road making? Occasioned partly by a fall in the price of wages and materials and

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partly by improvements in the skill and economy of applying labor and materials.

48. Improvements in road making? They consist in using Oxen ploughs and scrapers, and in the experience derived from their frequent use.

Bellemont and Easton Turnpike.

1. Extent. By actual measurement, 63½ miles.
2. Commences at Bellemont, in Wayne county.
3. Terminates two miles north of Roscommon, in Northampton county.
4. Passes through no towns nor over any large hills or streams.
5. Begun—small sections were commenced in 1817, but little work was done on the road until the year 1820.
6. Completed in the fall of the year 1821.
10. Capital stock, 22,900 dollars.
11. Price and number of shares—\$50 per share, and the number 458.
12. Private subscriptions—684 shares, or \$34,200.
13. State subscription—350 shares, or \$17,500.
14. Cost—\$972 per mile, all expenses included.
17. Materials—of the natural earth, generally.
19. Width—twenty feet.
21. Shape of road. Convex—rising in the middle fifteen inches.
22. Rate of tolls per mile—a loaded wagon, with broad wheels and four horses, four-fifths of a cent: a loaded wagon, with narrow wheels and four horses, four cents: a pleasure carriage, with two horses, two and two-fifths cents: a man and horse—three-fifths of a cent.
23. Distance of gates apart—twenty-one miles.
24. Number of managers—twelve: six would be sufficient.
29. Debts—\$12,235 55.
30. Market price of stock—no demand.
31. Road liable to be cut up—Yes, in the spring of the year, when the frost leaves the ground.
32. Quality of road—It is unpleasant for light carriages. The country is hilly.
35. Foundation of road—it is hard.
34. Prominent advantages—until this road was opened, there was no tolerable route to Easton and Philadelphia, from the country northward of Pocono, or eastward of Moosic mountains. By its connection with other turnpikes, a route is also opened into the western part of New-York state, and a strong inducement to advantageous settlement of the adjacent country is furnished.
35. Principal market—the settlements are new, and little produce is taken to market. The natural route is to Easton.
36. Benefits resulting. A sensible increase of population and improvement, in the vicinity of the road.
37. Where place of business and who president? Wayne

county; Rufus Grenell, president, resides in Canaan township, in said county.

40. Best form of a road? convex.

41. Greater height of centre above the sides—usually fifteen inches: more or less, according to the solidity of materials.

42. Proper depth for materials. This must depend upon the quality of the materials.

43. Greatest safe load? On narrow wheels, four horses can carry two tons without particularly injuring the road.

44. Wages of turnpike laborers? When commenced 60 cents, during the last year, forty, exclusive of boarding.

47. Causes of the present cheapness of road making?—Occasioned partly by the fall in the price of wages and materials, and partly by the improvements in the skill and economy of applying labour and materials.

48. Improvements in road making? Principally in that acquisition of knowledge which practice and experience only can communicate, as is the case in every trade and profession.

Berlin and Hanover Turnpike Road Company.

1. Extent? ten miles.

2. Commences at Berlin, in Adams county.

3. Terminates at Hanover, in York county.

4. Passes through Berlin and Abbottstown—crosses no large streams, but three small rivulets, over which bridges are built, with two arches.

5. Begun, in the year 1811.

6. Completed, in the year 1817.

10. Capital stock, \$8,000 dollars.

11. Price and number of shares, 50 dollars.

12. Private subscriptions, 32,000—1,800 lost.

13. State subscription, none.

14. Cost? ten dollars per perch; \$200 dollars per mile.

17. Materials: free and hint stones.

18. Size of stones? from three to four inches.

19. Width, twenty-one feet.

20. Depth of materials? in the centre, fifteen inches, and at the side twelve inches.

21. Shape of the road? Convex, difference three inches.

22. Rate of tolls? A loaded wagon with broad wheels and four horses, $2\frac{1}{2}$ cents per mile. A loaded wagon with narrow wheels and four horses, 5 cents per mile. A pleasure carriage, with two horses, $2\frac{1}{2}$ cents per mile. A man and horse, one half cent per mile.

23. Distance of gates apart—five miles on an average.

24. Number of managers, six and a president; the number not too great.

25. Average tolls, since the erection of gates? \$1160 per annum.

26. Average tolls for three years—one thousand dollars.

27. Annual dividend, since road was commenced—none.

29. Debts, two thousand dollars.
30. Market price of stock, from twenty to twenty-five, by some individuals; but the stockholders generally will not take less than they paid.
31. Road liable to be cut up? Middling, in the spring of the year
32. Quality of road? Middling.
33. Foundation of road. Generally hard.
34. Prominent advantages? Advantageous generally in the neighbourhood.
35. Principal markets—Baltimore and Baltimore road.
36. Benefits resulting? There has been a considerable increase of population and improvement, in the vicinity of the road, since its commencement.
37. Where place of business and who President? Abbotts-town; Jacob Ernst, president, resides in York county.
38. Should broad wheels go free? No.
39. If not, what exemption? The one half.
40. Best form of a road? Flat.
42. Proper depth for materials, fifteen inches.
43. Greatest safe load, three tons.
44. Best size or weight of stones? two inches.
45. Were materials near or distant? two miles.
46. Wages of turnpike labourers? When commenced one dollar per day; the last year seventy-five cents.
47. Causes of the present cheapness of road making? the fall of wages.

Berks and Dauphin Turnpike Road Company.

1. Extent. Forty one miles.
2. Commences on the west bank of the river Schuylkill, in the county of Berks, opposite the borough of Reading.
3. Terminates, about 80 perches east of Hummelstown, in the county of Dauphin.
4. Passes? Progressing west, it passes through Wommelsdorf, at 13 miles; at 16 miles Stouchtown; at 20 miles Myerstown; at 26 miles, Lebanon; at 31 miles, Millerstown; at 36 miles Palmyra—at 6 miles crosses Cochoosy creek; at 15 miles, Tulpehocken creek; at 25 miles, 28 m. 27½ m. 28 m. and 31 miles, Quitapahilla creek; at 33 m. Trout run; and at 38½ m. Spring creek.
5. Begun? In the summer of 1816.
6. Completed? Not yet.
7. Proportion completed, thirty-four miles.
8. When completion expected? Joseph Barnet, Esq. has contracted to have the road finished by the first day of October next.
9. Unfinished spaces—the west end remains unfinished.
10. Capital stock, 2100 shares.
11. Price and number of shares? 1000 shares at \$50 each.
12. Private subscriptions? \$71,076 79; of which sum 7271 07 remains unpaid, nor is it known whether it will ever be paid,

24. Cost of stone—per yard? \$1.00.
25. Cost of labour? \$1.00 per yard.
26. Cost of carriage? \$1.00 per yard.
27. Cost of carriage? \$1.00 per yard.
28. Size of stones? 12 inches in diameter, at least one side.
29. Width of Trench? 4 feet.
30. Depth of material? 15 inches in the centre and 5 inches at the sides.
31. Shape of Road? Convex, 2 inches higher in the centre than at the sides.
32. Kind of wheels? A loaded wagon with broad wheels and two horses, 2 extra. A loaded wagon, with narrow wheels and two horses, 4 extra. A portable carriage, with two horses, four wheels, 24 extra. A man and horse, 6 extra.
33. Distance of gates apart—about 5 miles on an average.
34. Number of managers—eight and a president, the number is not too great.
35. Average tolls, since the erection of gates—about four thousand dollars.
36. Average tolls for three years—\$4250. This average is increased, owing to the increase of distance.
37. Annual dividends, since road commenced—the tolls have been appropriated to the payment of debts, repairing and completing the road.
38. Debts, about \$9000, exclusive of Mr. Barnet's contract.
39. Market price of stock? none in market, except forced sales, which sell from 15 to \$30.
40. Road liable to be cut up? considerably in the spring of the year.
41. Quality of road? our road is generally smooth and the country not hilly.
42. Foundation of road? Hard.
43. Prominent advantages? It affords an easy and at all seasons of the year, a good road for the transportation of produce, increase of population, improvement generally, and brings the Susquehanna trade within 50 miles, land carriage, to Philadelphia.
44. Principal market, Reading and Philadelphia generally along our road.
45. Benefits resulting—see question 34.
46. Where place of business and who president, at Lebanon, Christian Ley, Esq. who resides in Jackson township, Lebanon county, near Myerstown.
47. Should broad wheels go free? Not entirely.
48. If not, what exemption? about one half.
49. Best form of a road? Convex.
50. Greater height of centre above the sides? At least 9 inches.
51. Proper depth for materials? At least 18 inches.
52. Greatest safe load? 60 cwt. on broad wheels, & 30 cwt. on narrow wheels.
53. Best size or weight of stones? stones cannot be made too small.

45. Were materials near or distant? Generally from $\frac{1}{2}$ to $\frac{3}{4}$ a mile.
46. Wages of turnpike labourers? in the beginning, about seventy-five cents, and now about 50 cents.
47. Causes of the present cheapness of road making—by a fall in the price of labor and diminution of labor.
48. Improvements in road making—there are none.

Bethany and Dingman's Choice Turnpike Road Company.

1. Extent, about fifty miles.
 2. Commences—at Centreville, in Wayne county.
 3. Terminates, at the Delaware river, Dingman's ferry, Pike county.
 4. Passes town of Bethany, and over the Lackawaxen, at the narrows.
 5. Begun, in 1812.
 6. Completed—is not yet completed
 7. Proportion completed—32 miles, being the whole distance, from its commencement to its intersection, with the Milford and Owego turnpike.
 8. When completion expected? it is doubtful whether it will soon be finished.
 9. Unfinished spaces—the whole distance from the Milford and Owego turnpike to Dingman's ferry.
 10. Capital stock, \$40,000.
 11. Price and number of shares, fifty dollars a share—amounting to 800 shares.
 12. Private subscription, 24,400 dollars.
 13. State subscription, 8,000 dollars.
 14. Cost, average cost per mile, 904 dollars, all expenses included.
 15. Contracts made, none are made.
 16. Contracts could be made, at seven hundred dollars prompt payment.
 17. Materials, composed principally of the natural earth, with a covering of hard pan or gravel on the surface, some parts bedded with stone and covered with gravel, and some where the ground is marshy, are bedded with timber.
 18. Size of stones, all stones at or near the surface, are required to be broken so small as to pass through a ring of $2\frac{1}{2}$ inches diameter.
 19. Width—Twenty feet.
 20. Depth of materials? Fifteen inches in the middle and nine inches at the sides.
- Shape of road—It is convex, where it is constructed of earth, 15 inches—of stone 9, and of timber six.

22. Rate of tolls? A loaded wagon, with broad wheels and 4 horses from 10 to 12 inches wide, four-fifths of a cent. A loaded wagon, with narrow wheels and 4 horses, 4 cents. A pleasure carriage, with two horses, two and two-fifths of a cent. A man and horse three-fifths of a cent.

23. Distance of gates apart, at present there are but two gates on 32 miles, a third is contemplated.

24. Number of managers? twelve.

25. Average of tolls, since erection of gates—the first gate was only erected in July last.

29. Debts? The company are indebted in the sum of \$3,352 11 but may probably reduced by collections of original subscriptions, to less than \$2000.

30. Market price of stock—very little of the stock is bought or sold; twenty dollars is thought a fair estimate at this time.

31. Road liable to be cut up—it is not, except during a short period, when the frost leaves the ground, in the spring.

32. Quality of road—it is generally a smooth road; the country is hilly.

33. Foundation of road—it is generally hard.

34. Prominent advantages—it opens a route for intercourse with the body of the state, by extending to the Delaware river, below the Barrens, and furnishes a strong inducement to the settlement and improvement of the adjacent country.

35. Principal market—the market will be divided between New-York, by a route through New-Jersey and Philadelphia, by a conveyance down the Delaware river; the latter will be the least expensive.

36. Benefits resulting—a rapid increase of population and improvement commenced with the road, in 1812, and abated with the change in times, which put a stop to the progress of the road, in 1815.

37. Where place of business and who president—at Bethany, in Wayne county; at present, Jason Torry is president and resides at Bethany.

38. Should broad wheeled wagons go free, there have been no broad wheeled wagons in use on the road.

40. Best form of a road—moderately curved.

41. Greater height of centre, above the sides: it should depend much upon the solidity of the materials. If of stone, 4 or 5 inches—if of earth, 10 or 12 inches, in its first formation.

42. Proper depth of materials—the depth should depend much upon the solidity of the materials; of stone or gravel, 10 to 12 inches.

43. Greatest safe load—40 cwt. is carried on narrow wheels, without special injury. The country is too hilly for convenience in carrying a much greater load.

44. Best size or weight of stones? No stone should be admitted near the surface, larger than would pass through a 2½ inch ring.

45. Were materials near or distant—they were near.

46. Wages of turnpike laborers, from 1812 to 1815, wages were from 75 to 80 cts. in the year past from 40 to 50.

47. Causes of the present cheapness of road making, occasioned partly by a fall in the price of wages and materials, and partly by improvements in the skill and economy of applying labor and materials.

48. Improvements in road making, much improvement has been made in the implements used in making turnpikes. But it is thought more has been gained by that knowledge which is acquired by experience and practice only.

Bridgewater and Wilkesbarre Turnpike Road Company.

1. Extent, about 64 miles.
2. Commences, at the New-York state line, in the county of Susquehanna.
3. Terminates at Wilkesbarre, in the county of Luzerne.
4. Passes through Montrose, Bridgewater, Springville, Tunckhannock, Easton, Exeter and Kingston. It crosses the Susquehanna at Wilkesbarre and at Tunckhannock, and Bowman's and Meshoppen creeks.—It passes no large hills nor mountains.
5. Begun—in 1813.
6. Completed—not yet.
7. Proportion completed—about §6 miles.
8. When completion expected—the ensuing spring, except about three miles which are not yet contracted for.
9. Unfinished spaces—25 miles at the south-west end, and about three miles north-east of Montrose.
10. Capital stock, §22,500.
11. Price and number of shares—§50 the price of shares—450 shares.
12. Private subscriptions—about §13,500.
13. State subscription—§2500.
14. Cost ? About §600 per mile.
15. Contracts made—at about §400 per mile.
16. Contracts could be made—at about §400 per mile.
17. Materials—natural earth.
19. Width—20 feet.
20. Depth of materials—at the centre, 18 inches.
21. Shape of road—convex, and 10 inches higher in the centre.
23. Distance of gates apart—two gates erected, and 13 miles apart.
24. Number of managers—12 managers and a President, and not too many.
25. Average tolls, since erection of gates—gates erected only about a year ago ; and other sections of the road being unfinished, the tolls are received for 21 miles only.
26. Average tolls for 3 years—about §300.
27. Annual dividends, since road commenced—none.
29. Debts—as a great part of the contracts are not finished, we

cannot ascertain to what amount the company will be in debt, when the road is finished.

30. Market price of stock—no established price.

31. Road liable to be cut up—some parts are liable, in the spring of the year, to be cut up, and others are not.

32. Quality of road—it passes over a hilly country.

33. Foundation of road—both soft and hard.

34. Prominent advantages—It facilitates the travel from the state of New-York, through Pennsylvania, by Wilkesbarre to Easton, and to Philadelphia; and opens the country for settlement, and increases the population.

35. Principal markets—Wilkesbarre, Easton and Philadelphia; and it passes by this road and the Easton and Wilkesbarre road.

36. Benefits resulting—There has been a very sensible increase of population and improvement.

37. Where place of business and who President? The business is principally conducted at Wilkesbarre, and Lord Butler is the President and resides at that place.

38. Should broad wheels go free? Wheels of 10-inches & more should.

40. Best form of road—convex.

41. Greater height of centre above the sides—12 inches.

42. Proper depth for materials—twenty inches.

42. Greatest safe load—upon broad wheels, $2\frac{1}{2}$ tons, and narrow wheels two tons.

45. Were materials near or distant? near at hand.

46. Wages of turnpike labourers—one dollar when commenced, and 75 cents last year.

47. Causes of the present cheapness of road making?

By the fall of the price of wages and materials, and by the improvement in the skill and economy of applying labour.

48. Improvements in road making? Consist in improvements in the art of road making and in the construction of tools.

Butler and Mercer Turnpike Road Company.

1. Extent—31 miles, 3 quarters and 20 perches.

2. Commences—at the centre of the public square in the borough of Butler, in Butler county.

3. Terminates—at the centre of the public square in the borough of Mercer, in Mercer county.

4. Passes—There is no town or village between the borough of Butler & Mercer—no considerable hills, nor distinguished by any name.—The principal streams are Muddy creek, Slippery Rock, Wolf creek and Nesbannock.

5. Begun in 1821.

6. Completed? is not yet completed.

7. Proportion completed—six miles.

8. When completion expected—on or before the first day of September next.

9. Unfinished spaces—on the first five miles, there are three miles almost finished—on the second and fifth miles, $3\frac{1}{2}$ miles; on the third five miles, $2\frac{1}{4}$ miles; on the fourth five miles, $4\frac{1}{2}$ miles not finished; and on the residue of the road, there is some work done, but no part of it completed.

10. Capital stock—\$7,500.

11. Price and number of shares—shares \$25 each—number 300.

12. Private subscriptions—\$8,750.

13. State subscription—There was appropriated by law, \$35,000 for the road from the north end of the Allegheny bridge, through Butler and Mercer, to Meadville, which to this company, estimating it at one third of the distance, would be \$11,666 66 2-3, and by the act of the last session, there was appropriated to this company, \$8,000.

14. Cost—655 dollars and 22 cents per mile.

15. Contracts made at 655 dollars and 22 cents per mile.

16. Contracts could be made—they have been made.

17. Materials—there is three fourths of a mile made of broken stone; the residue of clay, gravel, slate or sand.

18. Size of stones—so far as it is made of stone, a ring of four inches in diameter.

19. Width—in the borough of Butler, 36 feet; all the rest of the road twenty-five feet.

20. Depth of materials—the stone part 15 inches in the centre, and ten on the sides of the bed, formed so as to be 9 inches in the centre higher than the sides. The residue of the road, 24 inches higher in the centre than at the sides.

21. Shape of road—It is convex—two feet higher in the centre than at the sides.

22. Rate of tolls—there is no part of the road licensed.

23. Distance of gates apart—none erected.

24. Number of managers—A president and twelve managers; the number is not too great.

29. Debts—No debts due by the company, as the contractors are not to be paid until the whole work is completed.

30. Market price of stock—none sold.

31. Road liable to be cut up? When finished, in spring and fall it will be more liable to be cut up than a road made of stone.

32. Quality of road—It will be a smooth road, and passes in part over a hilly country, and in part over a flat country.

33. Foundation of road—generally hard.

34. Prominent advantages—It will give to the farmers and others a good road either to carry their produce to lake Erie or to Pittsburg, thence to Philadelphia, or any of the eastern cities, or by the Ohio to New Orleans. It will connect the military establishment at Pittsburg with the naval depot at Erie; and should the country be ever engaged in war with Great Britain, it would be useful as a military road.

35. Principal market—either to Pittsburg or to Erie; and from Pittsburg generally, to Orleans, by the Ohio; from Erie either to Canada or along the lakes.

36. Benefits resulting—not yet perceptible, but we anticipate that the road will have the effect to increase population and improvement in its vicinity.

37. Where place of business and who president? Butler; Wm. Ayres, Esq. is president, and resides in Butler.

38. Should broad wheels go free? We think not.

39. If not what exemption? At least one half.

40. Best form of a road? Convex, either of stone or clay.

41. Greater height of centre above the sides? If of stone, 15 inches; if of clay, two feet, where the breadth is twenty-five feet.

42. Proper depth for materials? To this question we can give no satisfactory answer, not having much experience.

44. Best size or weight of stones—four inches in diameter and not larger.

45. Were materials near or distant—they were procured from the bed of the road.

46. Wages of turnpike laborers—about forty cents and found in board.

47. Causes of the present cheapness of road making? Occasioned partly by a fall in the price of wages and materials, and partly by improvements in the skill and economy of applying labor and materials.

48. Improvements in road making? In making a clay road, in the use of scrapers; and in making a stone road, in forming the bed of the road with the plough and scraper, instead of the shovel and mattock.

Centre Turnpike Road Company.

1. Extent, Seventy-five miles.

2. Commences at Reading, in Berks county.

3. Terminates—at Sunbury, in Northumberland county.

4. Passes through Hamburg and Orwigsburg; crosses the river Schuylkill, Maiden, Pine, Little and Big Mahanoy. Roaring and Shamokin creeks, and Little Locust, Mahanoy, Broad and Blue mountains.

5. Begun in 1808.

6. Completed in 1814, according to the original plan. It was supposed that the greater part of the road would answer with merely shapeing, and it was only stoned where absolutely necessary. It has since been found necessary to stone more or less of it every year; perhaps ten or twelve miles of stoning will finish what may ever be necessary; as a great part of the road over the mountains will never require any.

10. Capital stock—\$100,000.

11. Price and number of shares—\$50 each; 200 shares.

12. Private subscriptions—about \$62,000.

13. State subscriptions—Three subscriptions—30,000 dollars, 15,000 dollars and 35,000; in all, 80,000 dollars.

14. Cost—according to the original plan, about 1200 dollars, but it has since been found necessary to stone some, at the rate of 3 or 4,000 dollars per mile.

15. Contracts made,

16. Contracts could be made.

} none made.

17. Materials—Stone and a hard, gravelly and slaty foundation.

18. Size of stones—The stones were never broken small enough; say from three to five inches.

19. Width—average sixteen feet.

20. Depth of materials—twelve to fourteen inches.

21. Shape of road—Originally convex.

22. Rate of tolls per mile?

Wagons with narrow wheels and four horses, 3 and one fifth cents.

Wagons with wide wheels 4 to 4½ inches, one half of the above
do. do. 4½ and above, nothing.

Pleasure carriages, with two horses, two and three fifth cents.
Horse and rider three fifths of a cent.

23. Distance of gates apart—there are seven gates, on the whole distance, seventy-five miles.

24. Number of managers—Twelve; probably not too many for a road of that length.

25. Average tolls since erection of gates? The whole amount of tolls for eleven years, average 6,572 dollars and 67 cents per annum. In the beginning of that period, tolls were not taken on the whole distance, the road not being finished.

26. Average tolls for three years? 7,136 dollars 98 cents.

27. Annual dividends, since commenced—none.

29. Debts—from ten to twelve thousand dollars.

30. Market price of stock—no sale.

31. Road liable to be cut up? Part of it in the spring, and indeed whenever there is a continuance of wet weather.

32. Quality of road—Generally rough; the greater part through a mountainous country.

33. Foundation of road—on the mountains, generally hard, and on the flat and level parts, soft.

34. Prominent advantages? It has brought us nearer to a market; facilitated travelling and the carriage of country produce and merchandize; it has contributed essentially to the improvement and settlement of the lands, to the north of us; in short, the advantages to the country through which it passes, and the northern part of the state, are incalculable.

35. Principal market? Reading and Philadelphia, by the Centre and Perkiomen turnpikes.

36. Benefits resulting? There have been improvements in the neighborhood of the road, wherever it was susceptible of improvement.

37. Where place of business and who president? Sometimes at Reading and sometimes at Sunbury, at the extremities of the road—E. G. Bradford, Esq. of the latter place, president.

38. Should broad wheels go free? Wagons above 4 and a half inches in breadth, in the tire, are by our rules exempt from tolls: 4 to 4 and a half inches pay half toll.

40. Best form of a road? Convex; merely sufficient to let the water run off.

41. Greater height of centre above the sides? Six inches.

42. Proper depth of materials? Twelve inches, if the stones are broken small and road well made.

43. Greatest safe load? 60 cwt. have frequently been taken with six horses. Wagons with narrow wheels, should not be allowed to take more than from 40 to 45 cwt. those having broad wheels, may take any weight.

44. Best size or weight of stones? The stones should not exceed six ounces in weight, or two inches in diameter. The great fault in making turnpike roads, in this country, is in breaking the stones too large, which prevents the road, if the expression may be used, from knitting; the materials continue loose and of course, are much easier displaced by the wagon wheels.

45. Were materials near or distant? Generally near at hand.

46. Wages of turnpike laborers? The work is generally done by contract; but it is not supposed that the difference in wages in 1808, when the road was commenced, and, in 1821, is much.

47. Causes of the present cheapness of road making? It is occasioned partly by the fall of wages and materials.

48. Improvements in road making? Little or no improvement apparent in the skill and economy of labor and materials, so as to render the expense of making the road less.

Centre and Kishacoquillas Turnpike Road Company.

1. Extent. Distance not ascertained—supposed to be twenty three miles.

2. Commences—at the borough of Bellefonte in centre county.

3. Terminates—at the end of the Lewistown and Kishacoquillas turnpike road, near Brown's mills, Mifflin county.

4. Passes through Bellefonte, over Kishacoquillas creek, the Mountain streams, Sinking creek and a number of minor streams; through the Nittany mountain and the mountains denominated The Seven Mountains.

5. Completed—not yet commenced.

8. When completion expected? It is expected the whole route will be completed in the autumn of 1822.

10. Capital stock—50,000 dollars.

11. Price and number of shares, \$50 per share.

13. State subscription, \$20,000, which in connexion with the sums subscribed by individuals will be amply sufficient to make the road.

- 15. Contracts made—none have been made.
- 16. Contracts could be made, at about \$2,000.
- 17. Materials? Stone, gravel and other hard substance.
- 18. Size of stones? Should pass through a three inch ring.
- 32. Quality of road? It passes over a very hilly country.
- 33. Foundation of road?—Solid foundation.

34. Prominent advantages? The route of our road passing through Nittany, Penn's and Kishacoquillas valleys, opens an easy and direct communication with Lewistown, situated on the Juniata river, which affords a safe navigation to Columbia and to the mouth of the Swatara creek, the inlet of the contemplated Union canal, through which the produce of our country would be immediately conveyed to market. There is no section of the state of equal extent of territory, from which so large a quantity of flour, wheat, rye, whiskey, pork, lard, butter, corn, &c. are exported, as from the territory through which the route of this road passes. This, combined with the advantages which the extensive iron manufactories of Centre county would derive from the road, renders it one of much consequence, in its immediate neighborhood. Its importance to the state at large, is very extensive. At Lewistown, by the Lewistown and Kishacoquillas turnpike road, it is connected with the Northern turnpike from Pittsburg, to Philadelphia at Bellefonte—it connects with the Erie and Waterford turnpike, being a connecting link in the great chain in the turnpike route passing through the centre of the state, and opening a direct communication from the waters of the lakes with Philadelphia, the mercantile emporium of the state. In addition to this, it opens to emigrants from the east, a route to the unsettled parts of the state, situated west of the Allegheny mountain, between that mountain and lake Erie, comprising, in point of territory, nearly one fourth of the state, and not surpassed by any other section in capability of supporting a dense population, as it regards the excellence and fertility of its soil.

35. Principal market? Philadelphia is the principal market for our agricultural produce. It passes by wagons, over the contemplated route of our road, through Lewistown, Harrisburg and Lancaster, to Philadelphia; or is deposited at Lewistown, on the Juniata, and from thence conveyed down that river, in arks &c. to Columbia, and from thence transported by wagons to Philadelphia.

37. Where place of business and who president? Our business is conducted at John Kerr's, Potter's mills, Centre county; Philip Benner is the president, who resides at Rock iron works, in the vicinity of Bellefonte.

38. Should broad wheels go free? Broad wheeled wagons, nine inches in width of tire, ought to be exempted from toll, other tire in proportion, to that width.

40. Best form of a road? A convex road would be preferred.

41. Greater height of centre above the sides? When of stone, it ought to be raised twelve inches in the centre, and nine at the sides—in gravel roads the difference should be much greater.

20. Depth of materials—the dept of materials depends on the nature of the soil over which the road passes; if of ordinary solidity, twelve inches of stone in the centre and nine at the sides, if well pounded would be sufficient.

44. Best size or weight of stones—the smaller the stones are broken, the better: one ounce in weight, would be preferred; but it is extremely difficult to force the contractors to break them small enough.

45. Were materials near or distant? The materials on our route are abundant and very convenient.

47. Causes of the present cheapness of road making?—The fall in the price of wages and materials, and the improvements in the skill and economy of applying labour and materials, both combined to produce it.

48. Improvements in road making—consist in the use of tackle and machinery, in taking up the timber by the roots, and its removal from the bed of the road; and in ploughs and scrapers, drawn by oxen and horses, in the formation of the road.

Chesnut-Hill and Spring-House Turnpike Road Company.

1. Extent? Seven miles three quarters and twenty-six perches.

2. Commences at Chesnut Hill, in Philadelphia county.

3. Terminates at the Spring-House tavern in Montgomery county.

4. Passes through Flowertown, and over Knebley's run, Sandy run, Harmer's creek, Burk's creek, Haag's creek, Clemens' creek, over Chesnut-Hill, Church-Hill, Slaughter's-Hill, Berk's and Hawk's-Hill.

5. Begun, in 1804.

6. Completed—in 1805,

10. Capital stock, 70,000 dollars.

41. Price and number of shares—\$100 per share, 700 shares.

12. Private subscription? The whole capital was subscribed by individuals.

17. Materials? Hard stones.

18. Size of stones—from 5 to 2½ inches.

19. Width, twenty-eight feet.

20. Depth of materials—one foot.

21. Shape of road—Convex, and one foot higher in the middle than at the sides: the difference in the form of the road, not in the materials.

22. Rate of tolls—a loaded wagon, with broad wheels and four horses, 4 cents per mile. A loaded wagon, with narrow wheels and four horses, 4 cents per mile. A pleasure carriage with two horses, 4 cents per mile. A man and horse, 1 cent per mile.

23. Distance of gates apart? Three miles.
24. Number of managers? Twelve—the number is not too great.
25. Average tolls, since erection of gates—\$6,045 per annum.
26. Average tolls for three years—for the last three years 6,239 dollars 50 cents.
27. Annual dividends, since road commenced—five and three fourths per cent.
29. Debts—none.
30. Market price of stock—\$95 to par.
31. Road liable to be cut up? It is liable to be cut, but more particularly in the spring of the year, if much travelled.
32. Quality of road? A smooth road through a hilly country.
33. Foundation of road—Generally hard.
34. Prominent advantages? The advantages are considerable, both to the neighborhood and state.
35. Principal market? The market is Philadelphia. It passes over our road and through Germantown.
36. Benefits resulting? There has been a sensible increase of population and improvement in the vicinity of the road, since its commencement.
37. Where place of business and who president? The place of business is Flowers town. John Bacon is President, and resides in Philadelphia.
38. Should broad wheels go free? No.
40. Best form of road—convex.
41. Greater height of centre, above the sides? One foot.
42. Proper depth for materials—one foot.
43. Greatest safe load—10 tons on broad wheels, without material injury. The same weight on narrow wheels will do injury.
44. Best size or weight of stones? Should pass through a two inch ring.
45. Were materials near or distant—from one to three miles in distance.
46. Wages of turnpike laborers—one dollar per day when commenced, and seventy-five cents last year.
47. Causes of the present cheapness of road making—Occasioned partly by a fall in the price of wages and materials, and partly by improvements in the skill and economy of applying labor and materials.
48. Improvements in road making—consist in a better knowledge in constructing the road.

Chambersburg Turnpike Road Company.

1. Extent fifteen miles.
2. Commences at Gallaghers's saw mill, in Adams county.
3. Terminates, at Chambersburg; in Franklin county.
4. Passes over the South mountain, and crosses the Conococheague and Falling Spring.
5. Begun? The road was commenced in 1812.
6. Completed—in November 1815.
10. Capital stock—500 shares of \$100—\$50,000.
11. Price of shares? \$100.
12. Private subscriptions? The amount subscribed by individuals was \$45,700: by the Chambersburg bank \$3,000.
13. State subscription—none.
14. Cost? The average cost of constructing the road including bridges, expenses of location, superintendence, &c. were about \$3,500 per mile.
17. Materials—of stone broken.
18. Size of stones? By contract the stones were to pass through a three inch ring; yet the general mass would require a ring of 4 inches.
19. Width? Twenty one feet.
20. Depth of materials—twelve inches.
21. Shape of road? The road is flat.
22. Rate of tolls? A loaded wagon with broad wheels and 4 horses per mile $2\frac{1}{2}$ cents. A loaded wagon with narrow wheels, and 4 horses, per mile 5 cents. A pleasure carriage with two horses and 4 wheels, per mile $2\frac{1}{2}$ cents. A man and horse, for five miles 3 cents.
23. Distance of gates apart? We have three gates from three to two miles apart.
24. Number of managers? A president and twelve managers, conduct the affairs of the company; and that number, in our opinion, is too great. It is difficult to convene the number necessary to constitute a quorum; and from experience it is found when services are to be rendered by so many, almost gratuitously, in a matter not involving extensively their own interest or exciting their feelings; and when they are not subjected, to a penalty for absence; small private engagements will occasion, and excuse such absence.—Matters discussed, considered, and adopted one day, again occupy a succeeding board, composed of members perhaps absent at the previous meeting. From such indifference, want of attention, division of responsibility, fluctuation of opinions and resolutions, the interests of the company are not so well promoted as if they were confided to a much smaller number, who would feel the responsibility of their trust, and could act with more promptitude, efficiency and uniformity.
25. Average tolls, since erection of gates? The average tolls since the erection of the gates, in November 1815, is $5\frac{1}{2}$ per cent. per annum. To express it more correctly, the average divid-

dead per annum, since the erection of the gates, is five and a half per cent.

26. Average tolls for three years—The average tolls per annum, for the last three years, is \$3,956 34; and the average per annum, for the three preceding years, is \$5,958 76.

28. Annual dividends for three years—\$3.

29. Debts—The company yet owes the Chambersburg bank for money advanced \$6,215. There is yet a portion of stock due by stockholders, which will be received, to the amount of about \$3,500, to be applied to the bank loan.

30. Market price of stock? from seventy to ninety dollars per share.

31. Road liable to be cut up—Our road is not liable to be much cut, at any season, but suffers most in the months of February and March.

32. Quality of road? It is a smooth stony road, and though it passes over and through the mountain for five miles, the road is generally a level one.

33. Foundation of road? It is generally hard.

34. Prominent advantages? The prominent advantages derived by our neighborhood from this road, is the having a good road to the Philadelphia and Baltimore markets, to be used by our farmers for the conveyance of their produce, at all seasons and times most convenient to themselves. It is the route by which Chambersburg is supplied with most of its lumber from the South mountain; and the advantage which the state at large receives, is its being a part of a continuity of turnpike from Philadelphia, viz: York and Chambersburg, to Pittsburg, and which is believed to be the shortest route between those cities.

35. Principal market—Baltimore; a portion is taken to Philadelphia.

36. Benefits resulting? The increase of population and improvement along the road is considerable.

37. Where place of business and who president? At Chambersburg, where the president, George Chambers, resides.

38. Should broad wheels go free? No.

39. If not, what exemption? One half.

40. Best form of a road

41. Greatest height of centre above the sides? } A convex road is, in our opinion, the most durable; such convexity being no greater than what is necessary to cast off the water that falls on the road.

Our experience informs us, that the travelling on either a flat or convex road, is on the middle of the road. The middle of the road necessarily wears convex from the friction and pulverization on its surface, but must sink in sustaining the whole weight and pressure of what passes over it; by which means furrows are made by the wheels. Such furrows contain the water that falls; and of all the injuries to which a turnpike road is exposed, those arising from water appears to be the greatest; whether that water arises through the bed of the road, or falls on its surface. Great, as it injures the road at any season; it is its destruction, if it is on

the road at those seasons, when it is exposed to alternate frost and thaw. The road ought to be 3 or 4 inches higher in the centre than at the sides of a road 20 feet wide; and this convexity should be most attentively maintained. So small a convexity will offer no obstacle or inconvenience to the animals carriages or weights which pass over it; but by securing it against the injuries of water, will contribute much to the solidity and smoothness of the road.

42. Proper depth of materials?

The depth of the materials for a good road, will depend something on the bed and foundation of it. That depth ought generally to be 12 inches: on a dry foundation, in some situations, it might be less. But it matters little what is the depth of the broken materials, if the road is not well secured from water. It is a great mistake, as is too often done, to sink the bed of the road which receives the stone, below the surface of the ground. It then becomes the reservoir for the surrounding water, and when that is permitted, 18 inches of stone will not prevent the wheels from cutting through to the bed of the road. But if the road is elevated, though its foundation is a wet one, yet being higher than its borders, with stone broken 12 inches, it will be durable and sustain any weight or pressure.

43. Greatest safe load? Any load may be transported which an ordinary wagon will sustain without injury, viz, from 35 to 50 cwt.

44. Best size or weight of stones?

It is our opinion, that the size of the stones of which the road is constructed, ought not to exceed 3 inches in diameter; and if they were broken so as not to exceed 2 inches, they would unite better, form a more solid mass, which would be less impervious to water, and less liable to be moved and disturbed by carriages of weight and velocity.

When the stones are thus broken well, it supercedes, in a short time, the necessity of a covering to smooth the road, and which too often consists of clay instead of sand or gravel.— This covering of clay is generally used when the road is located through a lime-stone country; and though it makes the road more pleasant and convenient in dry weather, yet, in wet or frosty weather, the clay, by retaining the water, not only makes the road heavy, but from the action of the frost on the water so retained, the foundation and solidity of the road is endangered, and the wheels of heavy carriages soon furrow it into ruts, that considerably impede the animals and carriages which pass over it.

45. Were materials near or distant? The materials were at hand for its construction.

47. Causes of the present cheapness of road making. The present comparative cheapness of road making is, in our opinion, occasioned chiefly by a fall in the price of labour. The price of labour is greatly diminished here within the last seven years occasioned by the fall of provisions, and the small demand for labour. Our turnpike road and many others, were made during the time of our overflowing depreciated paper currency; and when the improvements in turnpikes, bridges and buildings occasioned an extraordinary demand for labour, which, from the present suspension of both public and private improvements, no longer exists.—The different rates of wages per day, between the two periods, does not exhibit correctly the present comparative cheapness in making roads and other improvements. Where contracts have been recently made, the number of applicants is generally so great as to excite a competition, which reduces the price of labour, if it were estimated by the day, to a very small sum indeed.

Our labourers have acquired some skill in road making, which consists in levelling the bed of the road to more advantage, by which cuttings at one place are made to supply the fillings of other parts of the road, which was not so well understood in the first instance, by our contractors, who have often expended unnecessary labour, which by proper observation might have been avoided.

Chambersburg & Bedford Turnpike road Company.

1. Extent, fifty-five miles thirty-two perches.
2. Commences, at the public square in the borough of Chambersburg, Franklin county.
3. Terminates, in the centre of the borough of Bedford, Bedford county.
4. Passes, through Campbellstown, Loudon, McConnellsburg and Waynesburg, commonly called Bloody Run. It passes over East Conococheague, Back creek, West Conococheague, Licking creek, and the Raystown branch of the Juniata river, and over the North Mountain and Sidling Hill.
5. Began, in the year 1815.
6. Completed in March 1820; except a few perches at Licking creek bridge, where the managers contemplate the erection of a new bridge as soon as possible.
10. Capital stock, \$145,000.
11. Price and number of shares. Original price per share, \$50. 2100 shares were to be subscribed for by the state, and 800 by individuals or companies.
12. Private subscriptions. The amount subscribed by individuals and expected to be paid, was 113,850.
13. State subscription. The amount of the first subscription by the state, was \$105,000. The state afterwards subscribed at different times 62,500.
14. Cost \$6000 per mile. The difference between the ~~and~~

gate amount of stock subscribed for by the state, and by individuals, and our present debts,

	\$361,350
And the cost of the road,	330,000
	<hr/>
	31,350
From which deduct outstanding stock,	19,638
	<hr/>
	\$11,692

which has been expended in payment of interest due to the creditors of the company.

17. Materials, generally mountain, lime and sand stones—a small portion of slate stones.

18. Size of stones. The description of our road, which formed a part of each contract, required that "the stones should be all broken of a smaller size than three inches in diameter." We cannot say that this part of the contract was fully complied with: but the managers exerted themselves to obtain a compliance in this particular, and we believe generally succeeded, especially as to the upper part of the road.

19. The width of the road covered with the materials above mentioned, is twenty-two feet, and on each side thereof a way four feet wide, made of clay, level with the pavement.

20. Depth of materials, throughout, is one foot.

21. Shape of road. Convex—one inch higher in the centre.

22. Rates of toll. The rates of toll are precisely fixed and determined by the 12th section of the act of Assembly, of 24th February, 1806, to which we respectfully refer.

23. Distance of gates apart. There are six gates on our road: their average distance from each other is therefore about nine miles fifty-eight perches.

24. Number of managers. Six—the number is not too great.

25. Average tolls, since erection of gates. Since January 1817, we have received for tolls, \$45,592 25. During the first year, we received for ten miles only, amounting to \$4,089 25. During the second year, for twenty miles, amounting to \$8,638. And for the third and fourth year, we cannot state particularly the number of miles for which tolls were received, our licenses being received at different periods during that time. For the year ending 1st December, 1821, we received \$11,773 for tolls, for the whole of the road. From this the committee will perceive the great diminution in the amount of tolls received since the completion of the United States road.

26. Average tolls for three years. The average amount of tolls received per annum, for the last three years, is \$10,955.

27. Annual dividend since road commenced. In December 1817, a dividend of 5 per cent. was declared; in June 1818, one of 4½ per centum, and in December 1818, another of 5 per cent. were declared. Afterwards, the tolls were applied to the com-
of the road.

29. Debts, about \$80,000. Our outstanding stock is calculated at \$19,658; about 7,000 dolls. of which we consider good.

30. Market price of stock: no sales.

31. Road liable to be cut up. It is not generally liable to be cut up by wagons. In the spring and fall seasons of the year those parts of the road where slate stones were used, amounting to about four miles, are liable to be cut up by the narrow wheeled wagons.

32. Quality of road. We consider it a smooth turnpike. About 35 miles of it are level, or nearly so, and the remainder hilly.

33. Foundation of road. Generally hard.

34. Prominent advantages. The prominent advantages derived by the neighborhood are, that it affords a home market for a considerable part of the produce of the country, facilitates the exportation of the surplus produce, and the importation of plaster and other heavy articles necessary to the improvement and cultivation of the country, and affords to the citizens along the road, a more convenient intercourse with each other.

The state, we conceive, derives numerous advantages from our road, which will be greatly increased when the road from Bedford to Washington, now in a state of forwardness, shall be completed. It will draw off a great proportion of the travelling from the United States road through the eastern part of the state to Philadelphia, which would otherwise necessarily go to Baltimore; and thereby increase the trade and capital of that rival city. It serves to connect, by the shortest distance, our two great cities, and passing through the third, unites in some degree the commerce, agriculture and manufactures of the state. It is the oldest, best known and favourite route, affording accommodations and advantages to travellers, superior to those offered by any other road in our country of the same extent. Numerous other advantages will no doubt present themselves to every unprejudiced mind, and upon which, lest we should appear tedious, we forbear to enlarge at present; respectfully referring the committee to former communications on this subject made by our predecessors, to the Legislature.

35. Principal Market. Philadelphia and Baltimore are the principal markets. Wagons loaded at those cities with merchandize for Pittsburg, and the western parts of the state generally, take flour, whiskey, &c. on their return to Philadelphia.

36. Benefits resulting. We cannot speak with certainty as to the increase of population, but there has been a sensible and very great increase of improvement in the vicinity of our road since its commencement.

37. Where place of business, and who president. The business of our company is generally transacted at M'Connellsburg, where our present president, col. James Agnew, resides.

38. Should broad wheels go free. If our company were clear of debt, we might answer this question differently: but in its present situation we say, No.

39. If not, what exemption. A fair difference would be one-half toll for broad wheeled wagons.

40. Best form of a road. A convex road is the most durable; a flat road the most pleasant to the traveller.

41. Greater height of centre above the sides. Not exceeding four inches.

42. Proper depth for materials. If the foundation be hard, we consider a depth of twelve inches to be sufficient, where the materials are good.

43. Greatest safe load. We are of opinion that 60 cwt. may be transported over our road upon broad wheels, or 30 cwt. upon narrow wheels, without injuring it.

44. Best size or weight of stones. Two inches in diameter, of hard stones.

45. Were materials near or distant. Generally near at hand; but in some instances at a distance exceeding one mile.

46. Wages of turnpike laborers. From one dollar to one dollar and twenty-five cents, from the commencement to the completion of our road. During the last year we had none employed.

47. Causes of the present cheapness of road making. Principally by the fall in the price of labour, materials and provisions, and partly by improvements in their application.

48. Improvements in road making. In the increased skill and experience of the managers, as well respecting the location as the construction of roads.

Cheltenham and Willow Grove Turnpike Road Company.

1. Extent, 10½ miles.
2. Commences, in Philadelphia county.
3. Terminates, in Montgomery county.
4. Passes, through sundry small villages and over sundry small streams.
5. Begun, in 1803.
6. Completed, in 1804.
10. Capital stock. No limitation.
11. Price and number of shares. \$100 per share, 808 shares.
12. Private subscription. The whole.
13. State subscription. None.
14. Cost. About \$8,000.
17. Materials. Pounded stone, the hardest to be had.
18. Size of stones. 2½ inches diameter.
19. Width. Twenty-four feet.
20. Depth of materials. 12 to 9 inches.
21. Shape of road. Convex; 6 inches curve.

22. Rate of tolls. The unit is 8 mills per mile, extending at the same rate to all carriages of draft: pleasurable carriages, double: an abatement of one half for carriages with wheels of 4 inches soal.

24. Number of managers. A president and twelve managers. perhaps fewer would be better.

25. Average tolls, since the erection of gates. Refer to the annual abstracts presented to the Legislature.

26, 27, and 28. Same reference.

29. Debts. None.

30. Market price of stock. 75 dollars per share, or thereabouts.

31. Road liable to be cut up. Certainly: especially in the spring, and late in the fall.

32. Quality of road. Tolerably smooth, but hilly.

33. Foundation of road. Generally solid earth.

34. Prominent advantages. It is a good road all the year round. Formerly it was never good, and in certain seasons partially impassable.

35. Principal market. Philadelphia.

36. Benefits resulting. A very obvious improvement.

37. Where place of business, and who president. Partly in the city, and partly in the country. The president is Robert Wharton, of Philadelphia.

38. Should broad wheels go free. Not entirely.

39. If not what exemption? Say one half. But there is some difference of opinion.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. From 6 to 9 inches in 20 feet.

42. Proper depth of materials. 12 to 9 inches.

43. Greatest safe load. The law fixes the weight.

44. Best size or weight of stones. The stones can hardly be too small.

45. Were materials near or distant. Generally near.

46. Wages of turnpike labourers. From 75 to 100 cents.

47. Causes of the present cheapness of road making. There does not appear to be much improvement in skill, &c.

48. Improvements in road making. In this country, where heavy wagons with narrow soaled wheels can hardly be entirely proscribed, paved roads would, in the opinion of many, be the best and cheapest in the end.

Clifford and Wilkesbarre Turnpike Road Company.

1. Extent. Forty-three miles, from Clifford to Wilkesbarre.
2. Commences, at Gibson, (formerly Clifford), in Susquehanna county.
3. Terminates, at Wilkesbarre, in Luzerne county.
4. Passes through Clifford, Greenfield, Blakely, Providence and Pittston, and over the Lackawana creek, and a mountain of the same name.
5. Begun, in 1813.
7. Proportion completed. About twelve miles nearly finished.
8. When completion expected. It is not contemplated by the company to make the road, excepting through the Beach Woods, so called, which is about 22 miles, and will be finished by next winter.
11. Price and number of shares. Price per share \$50.
12. Private subscription. 150 by individuals.
13. State subscription. \$6,500
14. Cost, about \$1200 per mile for the part nearly completed.
15. Contracts made, at the rate of 800 dollars per mile, for that part which is contracted for.
16. Contracts could be made, at 800 or 900 per mile.
17. Materials. Earth thrown up, with a sufficient quantity of gravel on the top.
19. Width. 20 feet.
20. Depth of materials. About 18 inches in the centre, and about 8 at the sides.
21. Shape of road. Convex: the road about ten inches higher in the centre than at the sides.
24. Number of managers. Twelve, but six are deemed sufficient.
32. Quality of road. Rather hilly.
33. Foundation of road. Hard.
34. Prominent advantages. An increase of population and the consequent improvement of the country.
35. Principal market. Philadelphia, by way of Wilkesbarre.
36. Benefits resulting. There has been a great increase of population since its commencement.
37. Where place of business and who president. Dundaff, in Clifford township. A. Dimock is now president, and resides at Dundaff.
40. Best form of a road. Convex.
41. Greater height of centre above the sides. About ten inches.
42. Proper depth for materials. In our country about 18 or 20 inches.

- 45. Were materials near or distant. Near at hand.
- 46. Wages of turnpike laborers. 62½ cents.
- 47. Causes of the present cheapness of road making. Principally in the skill and economy of applying labor and materials.
- 48. Improvements in road making. In the mode of grubbing up trees, and in scraping, &c.

Coshecton and Great Bend Turnpike Road Company.

- 1. Extent 50 miles.
- 2. Commences at the Delaware river, in the town of Damascus, in Wayne county.
- 3. Terminates. At the north line of the state, near the 20th mile-stone, in the town of Great Bend. Susquehanna county.
- 4. Passes, through the towns of Damascus, Lebanon and Mount-Pleasant, in Wayne county, and through Gibson, New-Milford and Great Bend, in Susquehanna county: and passes over the Susquehanna river by a bridge at the Great Bend, which is of itself a corporation distinct from the road. It also passes over the Moosic and Tunkhannock mountains.
- 5. Begun, in the year 1806.
- 6. Completed, in 1811.
- 10. Capital stock, 1000 shares of \$50 each, with power to increase the number of shares so as to fulfil the intention of the act of incorporation. The whole cost of road, including engineers, surveyors, &c. \$93,000.
- 11. Price and number of shares. Original price \$50. The final number, 1657.
- 12. Private subscription. 31,000 dollars.
- 13. State subscription. Nothing. The road was made by individual enterprise.
- 14. Cost 1620 dollars per mile.
- 17. Materials. Stone, earth, gravel, &c. Some wet places were bedded with timber.
- 18. Size of stone. The largest stone admitted of, were not to exceed two inches in diameter.
- 19. Width. Twenty feet.
- 20. Depth of materials. The depth in the centre is 18 inches: at the sides 9 inches.
- 21. Shape of road. It is a little convex, being about four inches higher in the centre than at the sides.
- 22. Rate of tolls. A loaded wagon with broad wheels and four horses, 8 cents for five miles; ditto, with narrow wheels, 20 cents for five miles; a carriage with two horses, 20 cents for five miles; a single man and horse, 3 cents for five miles.

22. Distance of gates apart. The first gate is erected at the 6 mile-stone from Delaware, and takes toll for 20 miles; the second gate at the 30 mile-stone, and takes toll for 15 miles; and the third gate at the 44 mile-stone, and takes toll for 15 miles: in all, three toll gates.

24. Number of managers. One president and twelve managers conduct the affairs of the company; but for the last 6 or 8 years, their concerns have been conducted by a committee of three, which experience has proven to answer their purposes much better. It is also much more economical. The general board meets once a year.

25. Average tolls, since erection of gates. Nearly \$4000 per annum.

26. Average tolls for three years. 3,866 dollars, the average.

27. Annual dividend since road commenced. The whole dividends since the road commenced, amount to \$5 25 per share; and a debt of 11,000 dollars was paid out of the tolls of the first three years before any dividends were made.

28. Annual dividends for three years, 91 cents per share.

29. Debts. The company is not in debt.

30. Market price of stock. Ten dollars per share.

31. Road liable to be cut up. It is not liable to be much cut up by wagons, excepting in the month of April and early part of May.

32. Quality of road. The face of the road is tolerably smooth. It passes over a very hilly country indeed.

33. Foundation of road. Generally hard.

34. Prominent advantages. It has furnished a convenient passage for settlers into this new rough country. The taverns on it furnish a market for part of the settlers produce; and the tolls, say \$4000 annually, which are principally collected from strangers, and again expended on the repairs of the road, which repairs are done by the people in the neighborhood, is also a great advantage. In fact, Susquehanna county almost owes its existence to this road.

35. Principal market. At the Delaware river. Some small part is carried to Newburg, on the North river.

36. Benefits resulting. Owing to the construction of the road, population and improvements have increased very much.

37. Where place of business, and who president. At Damascus, on the Delaware, and at the Great Bend of the Susquehanna, alternately. The present president is William Thompson, who resides at the Great Bend, Susquehanna river.

38. Should broad wheels go free. We do not feel ourselves qualified to answer this question, as very few broad wheeled wagons have ever passed over this road. They are quite uncommon in this section of the country.

40. Best form of a road. A convex road we deem most durable.

41. Greater height of centre above the sides. From four to six inches, not more. This road, when made, was eighteen inches found it very inconvenient.

42. Proper depth for materials. On this road we have found 12 inches thickness of hard gravel, or 8 inches of pounded stone, on the carriage way, to answer our purpose.

43. Greatest safe load. We perceive no material injury from loads of 45 cwt. on narrow wheels, except in the month of April, when the frost is coming out of the ground. Our road is too hilly for heavy loads.

44. Best size or weight of stones. Not to exceed two inches in diameter.

45. Were materials near or distant. They were generally procured on the tract of the road and on its margin.

46. Wages of turnpike laborers. When the road commenced laborers' were 75 cents per day. Last year they were 50 cents—prime hands, 56.

47. Causes of the present cheapness of road making. In part by a fall in the price of wages and materials, and in an equal degree by improved skill and economy in the application of labor and materials.

48. Improvements in road making. They consist in having ploughs and scrapers, and other tools, of a construction superior to those formerly used: but more materially in that adroitness and skill which the undertakers and workmen acquire by observation and experience.

Extract from the letter of the President, accompanying the foregoing answers.

"You'll perceive that at the rate of 1620 dollars per mile, for fifty miles, amounts to \$81,000. The actual cost of the whole road, including engineers, surveyors, managers' expenses and also compensation to some individuals, amounted to \$93,000. The 1657 shares, at 50 dollars per share, amounts to 82,850 dollars. The difference between these two sums, 9,150 dollars; being about the sum that the company were in debt, when the road was completed. That debt was discharged by the tolls collected during the three first years that the road was licensed. Since the payment of that debt, there has been, during the last seven years, dividends made that amount, in the whole, to \$5 25 per share. I would also inform the committee, that a great many of the contracts for making the road were entered into by the contractors, with a knowledge that they were to receive their pay in stock of the company, which occasioned an advance in the price, of 500 dollars per mile. Such a

road could now be made on a money contract, for 800 dollars per mile: but at that time the making artificial roads was a novelty in this section of country; consequently the directors were ignorant, and the contractors unskilful. The company's secretary living at a distance of fifty miles, it has not been in my power to be minutely correct; but [this statement] is so, in round numbers."

Danville Turnpike Road Company.

1. Extent. Eleven miles.
2. Commences, at Bear Gap, Northumberland county.
3. Terminates in Northumberland county, opposite Danville.
4. Passes, over Shamokin hills: no town or stream intervening.
5. Begun, in 1814.
6. Completed, in 1816.
10. Capital stock, about 7,000 dollars.
11. Price and number of shares. 25 dollars per share.
12. Private subscription. 7,000 dollars.
13. State subscription. None.
14. Cost. 600 or 700 dollars per mile.
17. Materials. Stone and gravel.
18. Size of stones. Three inches.
19. Width. Twenty feet.
21. Depth of materials. 10 inches in the centre, and 7 inches at the sides.
21. Shape of road. Convex.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, 25 cents; ditto, narrow wheels and four horses, 42 cents; a pleasure carriage with two horses, 25 cents, and for a single man and horse, 64 cents.
23. Distance of gates apart. But one gate, three miles from Bear Gap.
24. Number of managers. Twelve, not too many.
25. Average tolls since erection of gates, about sixty dollars.
26. Average tolls for three years, the same.
27. Annual dividends since road commenced. None yet.
28. Debts. About 5,200 dollars.
30. Market price of stock. None at market.
31. Road liable to be cut up. Excepting one or two miles, the road is firm—needs most repair in the spring.
32. Quality of road. Smooth, country over which it passes, hilly.
33. Foundation of road. Generally hard.
34. Prominent advantages. This road being the most direct route to the Centre turnpike, and leading into the heart of a rich country, the advantages are great.

66. Benefits resulting. A sensible increase of population and improvement.

67. Where place of business, and who president. At Danville. Daniel Montgomery, president.

68. Should broad wheels go free. Perhaps not entirely.

69. If not, what exemption. About 30 cents.

70. Best form of a road. Convex.

71. Greater height of centre above the sides. Three inches.

72. Proper depth of materials. Twelve inches by nine.

73. Greatest safe load. Four tons to a broad, and two to a narrow wheeled wagon.

74. Best size or weight of stones. 1½ inch.

75. Were materials near or distant. Stone near at hand.

76. Wages of turnpike laborers. 50 cents per day.

77. Causes of the present cheapness of road making. Produced as well by the fall in price of labor and materials, as by improvements in the skill and economy of applying them.

78. Improvements in road making. Experience.

Downingtown, Ephrata and Harrisburg Turnpike Road Company.

1. Extent. 67½ miles.

2. Commences, at Downingtown, Chester county.

3. Terminates, at Harrisburg, Dauphin county.

4. Passes. Through Waynesburg, Hinkleton, Ephrata, Campbellstown, and Hummelstown—over Beaver creek. Brandywine, Conestogoe, Cocalico, Middlecreek and Hammer creek, and the Welch and Furnace Hills.

5. Begun, in 1803 or 1804.

6. Completed, in 1819.

10. Capital stock. \$180,000.

11. Price and number of shares. \$100 per share.

12. Private subscription. 1165 shares.

13. State subscription. 600 shares.

14. Cost. 3,750 dollars per mile.

17. Materials. Good limestone and free stone.

18. Size of stones. 4 inches.

19. Width. 21 feet.

20. Depth of materials. 18 inches in the centre, and 12 inches at the sides.

21. Shape of the road. Convex.

22. Rate of tolls. A loaded wagon with broad wheels, 12 cents for five miles; ditto, with narrow wheels, 16 cents; a pleasure carriage, 12½ cents; a single man and horse, 3 cents.

23. Distance of gates apart, 7 1-2 miles.

24. Number of managers. 1 president, 12 managers and 1 treasurer.

25. Average tolls since erection of gates. For the year ending 1st, February, 1822, the dividend amounted to 9,183 dollars. As the road has not been finished more than about two years, the tolls are nearly the same for each year.

27. Annual dividends—expended in finishing the road.

29. Debts. About \$565,000.

30. Market price of stock. From 10 to 40 dollars.

31. Road liable to be cut up. Somewhat, in the spring of the year.

32. Quality of road. Generally level.

33. Foundation of road. Generally hard.

34. Prominent advantages. The ability to convey a load consisting of 24 barrels of flour, with the same ease as one of 12 barrels, before the construction of the road; and an increase of travelling along the route.

25. Principal market. Philadelphia.

36. Benefits resulting. A great increase of population and improvement in the vicinity of the road.

37. Where place of business and who president. The business is conducted at different places along the road. John Wallace, the present president, resides at Earl, in Lancaster county.

38. Should broad wheels go free. Not unless of greater breadth than common.

39. If not what exemption. One half.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. Six inches.

42. Proper depth for materials. 18 inches.

43. Greatest safe load. From one to four tons.

44. Best size or weight of stones. Four inches in diameter.

45. Were materials near or distant. Near at hand.

46. Wages of turnpike laborers. At commencement one dollar, and the last year 40 cents per day.

47. Causes of the present cheapness of road making. Fall in the price of materials.

Easton & Wilkesbarre Turnpike road Company.

1. Extent. About 60 miles.

2. Commences, at the borough of Wilkesbarre, in Luzerne county.

3. Terminates, at the borough of Easton, in Northampton county.

4. Passes, through the village of Stoddertsville, over the Lehigh, Beaver creek, Tobyhanna and Tunkhannock creeks, and over the Wilkesbarre, Pocono and Blue mountains.

5. Begun, in 1805.

6. Completed. 32½ miles were completed in 1807: the residue in 1815.

7. Proportion completed. 47½ miles.
8. When completion expected. We have no funds to enable us to proceed further.
9. Unfinished spaces. From near the Blue Mountain to the borough of Easton.
10. Capital Stock. 60,000 dollars.
11. Price and number of shares. 50 dollars per share: number of shares, 1200.
12. Private subscriptions. 45,000 dollars: residue of the stock the contractors received.
13. State subscription. 12,500 dollars.
14. Cost. \$1,541 66 per mile.
15. Contracts made. None.
16. Contracts could be made. About the average price of what has been already made.
17. Materials. Stone, timber and natural earth.
18. Size of stones. Various: no particular standard.
19. Width. Twenty feet.
20. Depth of materials. Eighteen inches in the centre, and six inches at the sides.
21. Shape of road. The timber road flat, the stone road convex; the latter twelve inches higher in the centre than at the sides.
22. Rate of tolls. As the law contemplates different descriptions of broad wheels, we refer you to the law incorporating the company, passed the 11th of February, 1803.
23. Distance of gates apart. About 17 miles.
24. Number of managers. Twelve managers and a president. We think the number too great.
25. Average tolls since erection of gates. \$4,188 57 1-3.
26. Average tolls for three years, \$3,640 73.
27. Annual dividend since road commenced. There have been dividends for the following years, viz: 1808, 1810, 1814, 1815, 1816, 1817, 1818, 1820 and 1821. Average for those years upon each share of stock, about \$1 89.
28. Annual dividend for three years, \$1 33 1-3, the average dividend for the last three years: two only out of the three years, yielding a dividend.
29. Debts. Not any.
30. Market price for stock. From 25 to 30 dollars.
31. Road liable to be cut up. Some part is liable to be cut up in the autumn and spring seasons.
32. Quality of road. Some part rough and some part smooth, and over a hilly country.
33. Foundation of road. It is esteemed to be about one half hard, and one-half soft.
34. Prominent advantages. Facility of travelling, and transporting to market the produce of this and the country bordering on the Susquehanna river, northward into the state of New York.

35. Principal market. Easton and Philadelphia, and passes along the Easton and Wilkesbarre turnpike road.

36. Benefits resulting. There has been a sensible increase of population and improvement.

37. Where place of business, and who president. At the borough of Wilkesbarre. Lord Butler is president, and resides at Wilkesbarre.

38. Should broad wheels go free. No.

39. If not, what exemption. In our opinion, the law which regulates the tolls on this road, fixes a proper standard.

40. Best form of road. Convex.

41. Greater height of centre above the sides. From 12 to 18 inches.

42. Proper depth of materials. From 18 to 20 inches.

43. Greatest safe load. We think that a broad wheeled wagon, carrying three tons, will not injure the road more than a narrow wheeled one, carrying two tons.

44. Best size or weight of stones. Two inches in diameter.

45. Were materials near or distant. Near at hand.

46. Wages of turnpike laborers. About 50 cents per day, and boarded; and no material variation in the price during the progress of the work.

47. Causes of the present cheapness of road making. Cheapness of labor and materials, and improvements in the skill and economy of applying them.

48. Improvements in road making. They consist in improved knowledge derived from practice, and particularly in the construction and use of implements.

Erie and Waterford Turnpike Road Company.

1. Extent. Fourteen miles.

2. Commences, at the borough of Erie, county of Erie.

3. Terminates, at Waterford, in the above county.

4. Passes, through no towns. Crosses Walnut creek, a small mill-stream about four miles from Erie, and crosses the dividing ridge between the waters that discharge into Lake Erie and those that discharge into the Allegheny river and French creek; a gradual ascent for about ten miles from Erie, thence a gradual descent of about four miles, to Waterford.

5. Begun, in the year 1807.

6. Completed, in the year 1809.

10. Capital stock, authorized by law, 25,000 dollars.

11. Price and number of shares. 500 shares, of \$ 50 per share.

12. Private subscriptions. Amount actually paid into the treasury, \$ 20,502 38.

13. State subscription. One hundred shares.

14. Cost. Average cost per mile, \$ 1,571 43.

17. Materials. Principally the natural soil, A small proportion of gravel.

19. Width. Twenty-four feet.

21. Shape of road: Convex: depth of materials in the centre twenty inches, at the sides six inches.

22. Rate of tolls. The rate of tolls for the whole distance (14 miles) for loaded wagons with broad wheels drawn by four horses 60, 50, 32 and 24 cents; ditto, with narrow wheels and four horses, \$ 1; a pleasure carriage drawn by two horses, 80 cents; a single man and horse, 12½ cents.

23. Distance of gates apart. There is but one gate: that about ten miles from Erie.

24. Number of managers. The affairs of the company are conducted by eight managers. For a road of this length, six managers might suffice.

25. Average tolls, since erection of gates, \$1,392 12.

26. Average tolls for three years, \$1,156 43.

27. Annual dividend since road commenced. No dividend has ever been declared by this company.

29. Debts. None.

30. Market price of stock. No sales.

31. Road liable to be cut up. The road is most liable to be out up in the spring and fall.

33. Foundation of road. The road is made over hard ground: the land susceptible of cultivation.

34. Prominent advantages. Before the road was made, a team of four horses or oxen, could transport but about twelve cwt. at a load, and make a trip in three days. Now the same team can transport forty-eight to fifty cwt. with the same ease, and make the trip in one and a half days. It also greatly facilitates the intercourse with the interior of the state.

35. Principal market. The market for this section of the country is up the Lakes, Michigan Territory, and Upper and Lower Canada. When the Erie canal is completed, the market will be New-York, unless the waters of the interior section of the state should be improved.

36. Benefits resulting. There has been a sensible increase of population and improvement.

37. Where place of business, and who president. The business is conducted at Erie: president, Rufus S. Reed, resident at Erie.

38. Should broad wheels go free. On a road like ours, we do not think broad wheeled wagons any advantage to the owners, or the road.

39. If not, what exemption. We think not greater than already provided for by law. Broad wheeled wagons have been tried and abandoned.

40. Best form of road. Convex.

41. Greater height of centre above the sides. About one foot.

43. Greatest safe load. As a great proportion of the road is made on a clay soil, in dry weather there is but little difference between broad and narrow wheels. Loads of three tons have been frequently transported on this road.

- 45. Were materials near or distant. Near at hand.
- 46. Wages of turnpike laborers At the commencement of the road, from 50 to 75 cents per day. Last year about 37 1-2 cents, and boarded.
- 47. Causes of the present cheapness of road making. The reduction of labor, &c. and improved skill in its application.

Falmouth Turnpike Road Company.

- 1. Extent. Six miles.
- 2. Commences, at Elizabethtown, Lancaster county.
- 3. Terminates, at Falmouth, Lancaster county.
- 4. Passes, through Newville, across Conoy creek and over Conewago hill.
- 5. Begun, in the year 1811.
- 6. Completed, in the same year.
- 11. Price and number of shares. \$50 per share.
- 14. Cost. About \$3,200 per mile.
- 17. Materials. Stone.
- 18. Size of stones. About four inches in diameter.
- 19. Width. Twenty-one feet
- 20. Depth of materials. Twelve inches in the centre, and ten at the sides.
- 21. Shape of road. Convex.
- 22. Rate of tolls. None taken now.
- 23. Distance of gates apart. One gate about the middle.
- 24. Number of managers. None.
- 25. Average tolls since erection of gates. Not sufficient to keep the road in repair.
- 30. Market price of stock. No sales.
- 32. Quality of road. Rough and hilly.
- 33. Foundation of road Hard.
- 34. Prominent advantages. The more easy introduction of lumber, &c.
- 35. Principal market. Philadelphia.
- 36. Benefits resulting. An increase of population and improvement in the vicinity of the road.
- 38-39. Should broad wheels go free—if not, what exemption. Two-thirds.
- 40. Best form of road. Convex.
- 41. Greater height of centre above the sides. Four inches.
- 42. Proper depth for materials. Twelve inches.
- 45. Were materials near or distant. Near at hand.
- 46. Wages of turnpike laborers. About ten or twelve dollars per month, when found in boarding and drink.
- 47. Causes of the present cheapness of road-making. Cheapness of labor and materials, and improvements in the skill and economy of applying them.

Frankford and Bristol Turnpike Road Company.

1. Extent. 28 1-8 miles.
2. Commences in the Northern Liberties, at the intersection of Front street and Germantown road.
3. Terminates, at Morrisville bridge, Bucks county.
4. Passes, through Frankford, Holmesburg and Bristol; over Frankford creek, Poqueston, Pennypack and Neshaminy.
5. Begun, in June, 1808.
6. Completed, in July 1812.
10. Capital stock. No limitation: but books were opened to receive subscriptions, 500 shares, at \$100 each.
11. Price and number of shares. \$100 per share; 2,098 shares.
12. Private subscriptions. 2053 shares—45 surplus.
13. State subscription. Nothing: nearly all the stock was subscribed by citizens of Philadelphia.
14. Cost. 2 sections, 10 miles, stone, cost

		\$109,248 25	\$10,924 82 per mile.
3	2	10,363 25.	5,181 62
	3 gravel	14,349 11.	4,783 04 gravel.
4, 5 and 6.	13 1-8 do.	42,306 39.	3,223 34 do
Neshaminy Bridge		31,165 75.	
2 lots and quarries stone,		1,901 67 near Frankford and Pennypack.	
17. Materials. First twelve miles, stone; remainder gravel.
18. Size of stone. 2½ inches.
19. Width. Twenty-six feet.
20. Depth of materials. 18 inches in centre, and 12 at the sides.
21. Shape of road. Convex.
22. Rate of tolls. A loaded wagon and broad wheels, (say more than 10 inches tire,) with four horses, 8 dimes per mile; ditto, tire above four inches, 32 dimes; a pleasure carriage with two horses, 3 8-10 cents; a single man and horse, 1 cent.
23. Distance of gates apart. 4, 6, 8½ and 16 miles.
24. Number of managers. Thirteen: eleven might do.
25. Average tolls since erection of gates. \$12,481 79.
26. Average tolls for three years. \$9,589 70.
27. Annual dividend since road commenced. \$5 83 1-8 per cent.

28. Annual dividend for three years. 1819, $3\frac{1}{2}$ per cent. 1820, $2\frac{1}{2}$ per cent. 1821, 3 per cent. Average, \$3 81, per cent.

29. Debts. \$3,988 75.

30. Market price of stock. 50 per cent. below par.

31. Road liable to be cut up. From November to May.

32. Quality of road. There are four hills in the first 13 miles.

33. Foundation of road. To Neshaminy, clay and loomy soil : from thence to Morrisville, gravel.

34. Prominent advantages. The advantages at the commencement were very great; but owing to several roads running parallel, say 1-16, 1-8, 1-4 and 1-2 mile from the turnpike as far as Pennypack, the land on the road has depreciated, and the stock fallen to the above price.

35. Principal market. Philadelphia, partially by this road, and more by the shunpikes; except in November and March, when the latter are bad.

36. Benefits resulting. A sensible increase of population and improvement in the vicinity of the road.

37. Where place of business, and who president. Philadelphia : James C. Fisher, esq. president.

38. Should broad wheels go free. Yes, if 12 inches.

39. If not, what exemption. Narrow wheels very injurious, especially in wet weather : difference as 6 to 1, carrying same weight.

40. Best form of road. Convex.

41. Greater height of centre about the sides. 6 to 7 inches, in 13 feet.

42. Proper depth for materials. If stone road, 18 inches in the centre and 12 at the sides : if gravel more in proportion to soil of foundation.

43. Greatest safe load. All wagons passing over the road in wet weather either with broad or narrow wheels, injure the road much, but more especially the latter, say five fold. In dry weather broad wheels can pass over the road with two tons, without much injury to the road : the narrow wheels, with one ton. But even in dry seasons, the wagons passing the road, with either broad or narrow wheels, following in the same track or rut, often cut the road through, if made of stone or gravel 12 inches deep.

44. Best size or weight of stones. Size of an egg; or if smaller, more advantageous.

45. Were materials near or distant. Part were : stone and gravel were hauled four to six miles.

46. Wages of turnpike laborers. At commencement, 7s. 6d. but the most of the road was done by contract, particularly the gravel. Last year, 75 cents per day.

Gap and Newport Turnpike Road Company.

1. Extent. Thirty miles.
2. Commences, at the Philadelphia and Lancaster turnpike road.
3. Terminates, at Newport, in Newcastle county, state of Delaware.
4. Passes through Cochranville, and over two branches of Octorara and one branch of Whiteclay creek.
5. Begun, in the year 1809.
6. Completed, in the year 1818.
11. Price and number of shares. 50 dollars per share.
12. Private subscription. 91,000 dollars.
13. State subscription. 20,000 dollars.
14. Cost. 3,666 dollars per mile.
17. Materials. Stone.
18. Size of stone. It was covenanted by the contractors that they should pass through a ring of four inches diameter, and at the top three inches.
19. Width. Twenty feet.
20. Depth of materials. At the centre fifteen inches, and at the sides twelve inches.
21. Shape of road. Convex, and three inches higher in the centre.
22. Rate of tolls.
A loaded wagon with broad wheels and four horses, two cents for every five miles;
Ditto, with narrow wheels, six cents, do.
A pleasure carriage with two horses, 12½ cents, do.
A single man and horse, three cents, do.
23. Distance of gates apart. Five miles.
24. Number of managers. A president and twelve managers. We have not found the number too great.
25. Average tolls since erection of gates. \$1,562 17.
27. Annual dividend since road commenced. None: the tolls having been entirely applied to repairing the road.

29. Debts. From five to six thousand dollars.
30. Market price of stock. Not known.
31. Road liable to be cut up. In the spring season of the year it is most liable.
32. Quality of road. The road is tolerably smooth, and passes over a moderately hilly country.
33. Foundation of road. Not, strictly speaking, either hard or soft, but partakes of both.
34. Prominent advantages. The community are benefitted by a saving of twenty miles land carriage from Columbia, on the Susquehanna river, to Philadelphia, by taking this road to Newport; from whence a cheap water-carriage can be had to Philadelphia. It is also a public benefit, as a road to one of the best wheat markets in the United States, the Brandywine mills. The neighborhood have the same advantages, in addition to the demand created for their marketing by the travelling on the road.
35. Principal market. Philadelphia, by the way of Newport.
36. Benefits resulting. A sensible increase of population and improvement in the vicinity of the road, since its commencement.
37. Where place of business, and who president. At different places in Chester county. Samuel Cochran is president.
38. Should broad wheels go free. If the wagon wheels were of the width of nine inches, to roll ten or twelve inches, they might be exempted to the benefit of the road.
42. Proper depth of materials. Without frequent repair, they will wear through, unless the depth should exceed that of any roads in the country.
43. Greatest safe load. This depends on whether it be a dry or wet time.
44. Best size or weight of stones. Three inches diameter.
45. Were materials near or distant. Part near at hand, and part distant.
46. Wages of turnpike laborers. The work was done almost entirely by the piece, and not by the day.
47. Causes of the present cheapness of road making. The cheapness of labor and materials, and improvements in the skill and economy of applying them.
48. Improvements in road making. The benefits of experience. In turnpike road making, as in every other business, practice makes perfect.

Germantown and Perkiomen Turnpike Road Company.

1. Extent. Twenty-five miles and one quarter.
2. Commences, at the intersection of Vine and Third-streets, the northern boundary of the city of Philadelphia.
3. Terminates, at Perkiomen creek, in the county of Montgomery.

4. Passes, through Nicetown, Germantown, over Chesnut Hill, by Hiter's marble quarries and various lime-kilns, through Hickorytown and Evansburg; it passes over German-town hill, Chesnut hill, the Wissahickon hill, Hickorytown hill, Plymouth creek hill, &c. &c. The streams are, Cohock-sink creek, Three-mile run, Logan's run, Wissahickon and Plymouth creeks, Sandy run, Stony creek, Armstrong run, and Skippack creek; bridges over all the streams.

5. Begun, in the summer of 1801.

6. Completed, in the year 1804.

10. Capital stock. No limited capital fixed by law, but such an amount as should be sufficient to complete the road. The amount expended and now the capital of the company, is \$285,000.

11. Price and number of shares. 100 dollars the original share; the number of shares subscribed for in the whole, 2,850.

12. Private subscriptions 285,000 dollars, actually paid in, by subscribers for stock.

13. State subscription. Nothing.

14. Cost. The whole being rapidly completed, the average expense has been \$11,287 18, per mile.

17. Materials. For two and a half miles, the artificial road was made 18 inches in depth, with gravel stones well screened: the remainder of stone, directed to be broken, so that for six inches in depth from the surface, each stone should pass through a ring 2 1-2 inches in diameter; the lower stratum of six inches was allowed to be so broken as that each stone should pass through a ring of five inches diameter.

19. Width. Twenty-eight feet.

20. Depth of materials. Endeavoured to be kept equal at the first making; the stones to be hammered well twelve inches in depth for the greater part of the road, and 9 inches where the nature of the ground and the remote distance would bear it.

21. Shape of road. It was made convex, except on the declivity of hills, rising at least 15 inches in the centre of the 28 feet; but a greater convexity would have been better.

22. Rate of tolls.

A loaded wagon with broad wheels and four horses, 1 cent and sixty five hundredths of a cent per mile; ditto, narrow wheels and four horses, 3 cents and three fifths of a cent; a pleasure carriage and two horses, 3 cents and three fifths of a cent; a single man and horse, nine tenths of a cent per mile.

23. Distance of gates apart. There are eight toll gates on this road, necessarily placed at unequal distances to guard against various evasions practised to avoid the payment of toll.

24. Number of managers. Twelve managers and a president: the number sufficient for the affairs of this road,

25. Average tolls since erection of gates. For the last seven years averaged, there has been received \$23,959 45 per annum, out of which all expenses for repairs, &c. &c. have of course been paid. From November 1807, to November 1821, a period of fourteen years, there has been paid by the company \$121,229 69, for repairs of the road, averaging \$546 57 per mile, per annum.

26. Average tolls for three years, \$20,903 62.

27. Annual dividend since road commenced. From 1st. May, 1805, when the first dividend was made, on the whole capital, there have been 33 semi-annual dividends, averaging \$4 76 per cent. per annum.

28. Annual dividend for three years. 3 and one third per cent. per annum.

29. Debts. None.

30. Market price of stock. From 55 to 65 per cent. say, 60 dollars for 100 dollars.

31. Road liable to be cut up. It is much cut by travelling wagons with heavy loads, more particularly in wet weather, but especially in the spring and the beginning of winter.

32. Quality of road. The road, as a turnpike, is smooth; the country undulating. No mountains, and but few great hills: the ascent regulated at less than four degrees.

33. Foundation of road. Generally hard.

34. Prominent advantages. The transport of flour and grain to and from the metropolis, of marble, lime and marketing to the city, at all seasons of the year, and generally the transportation of much heavier burthens than can be used in wagons on other roads. For upwards of nine miles, it may be considered as forming a part of the great north and south road.

35. Principal market. The principal market is the city of Philadelphia, but much produce is purchased on the way by the Wissahickon and other mills. When the roads are bad, the travelling is necessarily by this road; in dry weather the road is much evaded.

36. Benefits resulting. There has been a considerable increase since the commencement of the road. but whether merely on account of the road, or the increase of population, is not so clearly ascertained.

37. Where place of business, and who president. A superintendent is employed, who has the immediate care of the whole road, to oversee the repairs and the fidelity of the workmen. The managers keep their office in Philadelphia, where they generally meet. Benjamin Chew is president, and resides, part of the year in Philadelphia, and part of the year in Germantown.

38. Should broad wheels go free. No. The injury done to the road by broad wheels is less than by narrow wheels, and therefore a discrimination is now made in their toll: but by heavy loaded wagons of any description, the wear and tear of the road is great, and funds must be provided to keep it in repair.

39. If not what, exemption. About one half.

40. Best form of a road. This company considers a convex road much to be preferred.

41. Greater height of centre above the sides. In 28 feet, at least 18 inches; according as the ground may be wet or miry, a greater convexity would be useful.

42. Proper depth of materials. Of good hard stone, in general they ought to be twelve inches in depth, and broken to a small size, by which they pack better and are more solid.

43. Greatest safe load. The injury done to the road, by heavy loads, in wagons of either description, is considerable, especially in wet weather. From three to four tons weight have often been carried, contrary to law, upon narrow wheels: upon broad wheels, instances have been of marble stones, of upwards of seven tons, having been carried along the road.

44. Best size or weight of stones. Not more than three inches in diameter.

45. Were materials near or distant. Generally near at hand: some were transported nearly a mile. For repairs, they are often brought from one to three miles.

46. Wages of turnpike laborers. Laborers who boarded themselves but were furnished with tools, received for some years from 85 cents to one dollar per day; for the last year, wages were 75 cents per day.

47. Causes of the present cheapness of road making. The fall in the price of wages is important: the difference in the price of materials is not so evident. A road now to be made in the same district of country, would probably cost nearly the same, difference of wages of laborers excepted. Some roads made with the public money appear cheaper, but it is probable that they are inferior in solidity. In making roads adjacent to mountains, where abundance of stone may be had at a trifling or no expense, a great difference will appear; but where durable materials are scarce, they greatly enhance the cost. It is worse than labor lost, to put soft stone (if the expression may be used,) on a road over which heavy wagons are to pass. To make a good turnpike road, for all the seasons of the year, the hardest should be used, and an increased first cost would in the end be economy.

Gettysburg & Black's Tavern Turnpike Road Company.

1. Extent. Twenty-three miles.
2. Commences, at Gettysburg, in Adams county.
3. Terminates, at Shippensburg, in Cumberland county.

4. Passes over the South Mountain ; it crosses the head waters of the Conewago, and passes through a small town, called Mummasburg.

5. Begun, in December 1811.

6. Completed. Five miles were completed in March, 1815.

7. Proportion completed. From Mummasburg to Shippensburg, 18 miles, the work has not commenced, as there never was sufficient stock taken.

8. When completion expected. Doubtful.

10. Capital stock. Originally 20,000 dollars. But a law was passed authorising the company to extend the road to Shippensburg, 21st January, 1819.

11. Price and number of shares. 200 shares, at 100 dollars each.

12. Private subscriptions. 200 were subscribed ; 192 have been, or are expected to be, paid.

13. State subscription. Nothing.

14. Cost. About 9 dollars per perch, including bridges.

15. Contracts made. None.

16. Contracts could be made. At from 2,700 to 3,900 dollars per mile.

17. Materials. Stone.

18. Size of stones Three inches.

19. Width. Twenty-one feet.

20. Depth of materials. Twelve inches.

21. Shape of road. Flat.

22. Rate of tolls. A loaded wagon with broad wheels and four horses, 2 1/2 cents ; do. narrow wheels and four horses, 5 cents ; a pleasure carriage and two horses, 3 cents ; a single man and horse, 1 1/4 cent.

23. Distance of gates apart. There is but one gate.

24. Number of managers. One president and six managers, and not too many.

25. Average tolls since erection of gates. \$298 51.

26. Average tolls for three years. \$202 09.

27. Annual dividends since road commenced. Two dividends only have been declared, of two per cent. each.

29. Debts. The company will be relieved from debt, when they have collected some balances yet due.

31. Road liable to be cut up. Not much, but most in the spring.

32. Quality of road. As far as it is finished it is level, and not very rough generally.

33. Foundation of road. Hard.

34. Prominent advantages. Of great utility to the neighborhood in the transportation of produce to market, but of little importance to the state.

35. Principal market. Baltimore, the road uniting with the Gettysburg and Petersburg road, at Gettysburg.

36. Benefits resulting. The increase of population and improvement has not been great. Previously to the commencement

of the road the country was but thinly settled. The town of Mummasburg has been built since.

37. Where place of business, and who president. Generally at Gettysburg. William M. Pherson is president, and resides at Gettysburg.

38. Should broad wheels go free. Not entirely.

39. If not, what exemption. One half.

40. Best form of road. Convex.

41. Greater height of centre above the sides. Six inches.

42. Proper depth for materials. Sixteen inches at least, in the centre.

43. Greatest safe load. For broad wheels, three tons; narrow wheels, two tons; without materially injuring the road.

44. Best size or weight of stones. A road paved with good stone, eight or ten inches square, with six or eight inches broken fine on the top, in my opinion would be the best.

45. Were materials near or distant. Generally near at hand.

46. Wages of turnpike laborers. One dollar, when the road was made.

47. Causes of the present cheapness of road making. Principally owing to the fall in the price of wages and materials.

48. Improvements in road making. I know of no material improvements.

Gettysburg and Petersburg Turnpike Road Company.

1. Extent. Twenty-two and one-fourth miles.

2. Commences at the Maryland line, in the county of Adams.

3. Terminates, at Gallaher's saw-mill, in same county.

4. Passes through Littlestown and Gettysburg, and bridges over Willalloway's creek, Rock creek, Willowby's run, Marsh creek, and a number of smaller streams, and no hills of any consequence.

5. Begun, in the year 1809.

6. Completed. From the Maryland line to Gettysburg was completed February, 1810. An extension was commenced by a separate law, in 1812, from Gettysburg to Gallaher's saw-mill, South Mountain, about ten miles, and completed January, 1814.

10. Capital stock. 904 shares, of \$100 each.

12. Private subscriptions. The whole.

13. State subscription. Nothing.

14. Cost. 4,200 dollars per mile, on an average.

17. Materials. Stone and gravel, and well made.

18. Size of stones. Three inches in diameter; but in some situations a pavement of iron stone was made in the bottom, with six inches of gravel or broken stone over it.

19. Width. Twenty-one feet.

20. Depth of materials. Twelve inches, where broken stone was used entirely: where a pavement of iron stone was laid in

the bottom, it was covered with broken stone to the depth of six inches.

21. Shape of road. The road was made flat, but by repairs is at present convex, which we believe to be the best mode of constructing a road.

22. Rate of tolls. A loaded wagon with broad wheels and four horses, per mile, 2 cents 84-100ths.

Ditto, narrow wheels and four horses, do. 5 do. 68. do.

A pleasure carriage with two horses, do. 2 do. 84 do.

A single man and horse, do. 68 do.

23. Distance of gates apart. About $4\frac{1}{2}$ miles.

24. Number of managers. Six, and the number not too many.

25. Average tolls since erection of gates. \$4,115 23.

26. Average tolls for three years. \$4,676 58.

27. Annual dividend since road commenced. \$1 75 on the original stock.

28. Annual dividend for three years. 75 cents per annum: but part of the tolls was applied to the extinguishment of a debt due by the company.

29. Debts. 1,800 dollars.

30. Market price of stock. About \$50 per share.

31. Road liable to be cut up. The road is generally firm, but most subject to be cut up in the spring season.

32. Quality of road. The country over which it passes generally level.

33. Foundation of road. Generally good.

34. Prominent advantages. The most prominent advantage is, that the farmer can take his produce to market at a season of the year that he could not otherwise have done, and when he has no farming business to do; which he could not have done without the turnpike.

35. Principal market. Baltimore is the principal market at present: but if a free road is made to Philadelphia, it would furnish a great inducement for a considerable portion of our farmers, to make Philadelphia their place of trade.

36. Benefits resulting. Very considerable improvements have been made since, and in consequence of the turnpike road being made.

37. Where place of business, and who president. At Gettysburg. Alexander Cobean, the president, resides in Gettysburg.

38. Should broad wheels go free. We believe the regulations prescribed by the present law, to be fair; and are willing they should be continued.

40. Best form of a road. A convex form we believe to be the best.

41. Greater height of centre above the sides. If the pavement is 21 feet wide, we believe that the centre should be six inches higher than the sides. Ten inches of stone at the sides, and sixteen in the centre, well made, will make a good road.

44. Best size or weight of stone. The stone ought to be broken small enough to pass through a three inch ring, except where good iron stone can be had for a pavement. In such case, eight inches of good stone broken over such pavement, makes the best road.

45. Were materials near or distant. Generally convenient. In a few instances the stone were hauled a mile.

46. Wages of turnpike laborers. The uniform wages were a dollar per day, and during the last year, 75 cents per day.

47. Cause of the present cheapness of road making. We believe it to be owing to the cheapness of labor, and not to any improvement in the system of turnpike making.

Greensburg & Pittsburg Turnpike Road Company.

1. Extent. Thirty miles and one half and a few perches.

2. Commences, at Greensburg, Westmoreland county.

3. Terminates, at Pittsburg, Allegheny county.

4. Passes over Turtle creek, and through a few small villages, such as Adamsburg, Jackson and Stewartsville, in Westmoreland county, and Howard, Wilksburg and East Liberty, in Allegheny county.

5. Begun, in 1814-15.

6. Completed, in 1817.

10. Capital stock. The amount was not limited. Upon the subscription of 630 shares (\$32,500) the subscribers were to be incorporated.

11. Price and number of shares. 50 dollars per share, the number not limited.

12. Private subscriptions. About 65,000 dollars were subscribed, and, say 62,000, paid.

13. State subscription. 89,000 dollars.

14. Cost. Between 6000 and 7000 dollars per mile. It is to be observed, we commenced the business when every thing was at the very highest. A laborer, \$1 25 per day; a wagon and team, 5 and 6 dollars. Now a laborer is 50 cents, and a wagon and team, two dollars and a half. We were the pioneers. We first commenced the work on this side of the mountains, when there was no want of employment, and few willing to make contracts.

17. Materials. Stone, broken into small pieces.

18. Best size of stones. About four inches.

19. Width. Twenty-two feet.

20. Depth of materials. From twelve to eighteen inches in the centre, and from nine to twelve inches at the sides.

21. Shape of road. It is convex, and about eighteen inches higher at the crown.

22. Rate of tolls. A loaded wagon, with broad wheels and 4 horses, 3 cents a horse, for every 5 miles; with narrow wheels

and four horses, 4 cents a horse, for every 5 miles; a pleasure carriage with two horses, 12½ cents for every 5 miles; for a single man and horse, 3 cents for every 5 miles.

23. Distance of gates apart. There are five gates in the whole distance.

24. Number of Managers. One president and twelve managers. The number not too great, for we have never charged any thing for our services, and bear our own expenses. Where managers are in the practice of charging wages, and the road is finished, a fewer number might well answer.

25. Average tolls, since erection of gates. The first year after the road was finished, we received in toll, \$17,000. This year, (1821,) we received \$8,000 only. In 1818, gate No. 1, next Pittsburg, received \$5,000; in 1821, only \$2,500.

26. Average tolls for three years. About 10,000 dollars.

27. Annual dividend since road commenced. None. We have been applying the toll to extinguish the debts we owed upon completion of the road.

28. Annual dividend for three years. None.

29. Debts. 27,000 dollars.

30. Market price of stock. No sales.

31. Road liable to be cut up. Our road is most liable to be injured in the spring of the year. It is not liable to be much cut up; seldom, if ever, cut through. The transportation on it very heavy. A road wagon with narrow wheels, now carrying over the mountains 60 or 65 hundred. Formerly, an ordinary load, was thirty hundred.

32. Quality of road. It has that roughness common to stone road: the country hilly.

33. Foundation of road. It was generally a deep clay soil.

34. Prominent advantages. I briefly answer this by saying, that this is one section of the southern route from Philadelphia, to the head of the Ohio, tending to retain in Pennsylvania the inland carrying trade from the east to the west.

35. Principal market. Pittsburg—Passes upon this road, other turnpike roads, and the rivers Ohio, Allegheny and Monongahela.

36. Benefits resulting. A sensible increase of population and improvement in the vicinity of the road.

37. Where place of business, and who president. At Pittsburg and Greensburg. William Wilkins, of Pittsburg, is the president.

38. Should broad wheels go free. The advantages of broad wheels are certainly very great, and wagons of a proper width ought to be exempted. The great objection to making a total exemption is, that wagons are the principal source of profit; affording the fund from which dividends and even repairs are to be made.

39. If not, what exemption. A great difference ought to be made, so as to encourage broad wheels. The law now does not make a sufficient difference.

40. Best form of road. Convex—the greatest object is, *to keep the water off.*

41. Greater height of centre above the sides. Two feet, in a width of twenty.

42. Proper depth of materials. It depends on the quality. Limestone is the best. The safety and protection of the road must depend upon watching its wear, and continually repairing, until it becomes solid and compact. Heavily laden *narrow* wheel wagons, will cut through almost any depth of materials.

43. Greatest safe load. All new roads like ours, must be injured of course by heavy wagons. Narrow and broad wheels both now carry 60 and 65 hundred; and our repairs annually cost on an average, about \$ 100 per mile.

44. Best size or weight of stones. The smaller the better.

45. Were materials near or distant. In many instances convenient. But now in repairs, we use limestone as much as possible, and these we sometimes haul 3, 4 and 5 miles.

46 Wages of turnpike laborers. From a dollar to a dollar and a quarter—now 50 cents.

47. Causes of the present cheapness of road making. I am not aware of any particular improvement in constructing turnpikes. The common and only implements are the axe, grubbing hoe, shovel, plough and *yankee scoop*. It is a work now familiar to us, and people not afraid to undertake. The cheapness in construction, is owing to the low rate of labor and provisions, and the vast number of people wanting employment.

Hanover and Maryland Line Turnpike Road Company.

1. Extent. Seven miles 32½ perches.

2. Commences, in Hanover, York county.

3. Terminates, at the Maryland line, in York county.

4. Passes, through no town—crosses a few streams that required arches of four feet; two or three hills, that required four to five feet digging, to reduce under four degrees.

5. Begun, in 1808.

6. Completed, in November, 1809.

10. Capital stock, 35,000 dollars, in shares of 100 dollars, augmented to 375 shares, in consequence of extending the road through Hanover.

13. State subscription. Nothing.

14. Cost. About 5,360 dollars per mile, including two houses and two gates.

17. Materials. Chiefly flint and slate.

18. Size of stones. Three inches in diameter.

19. Width. Twenty-one feet.

20. Depth of materials. 12 inches in the centre, sloping to 9 inches at the sides.

22. Rate of tolls. A loaded wagon with broad wheels and four horses, 3 cents for each horse at each gate; ditto, with narrow wheels and four horses, 6 cents per horse, a pleasure carriage with two horses, 3 cents per horse; a single man and horse, 3 cents, at each gate.
23. Distance of gates apart. About 4 miles.
24. Number of managers. Twelve: six would do better.
25. Average tolls, since erection of gates. From the 9th of November, 1809, to March, 1821, the receipts of toll averaged \$3,460 per year.
27. Annual dividend for three years. $2\frac{1}{2}$ per cent.
28. Annual dividend for three years. $2\frac{1}{2}$ per cent.
29. Debts. None.
30. Market price of stock. None offered for sale.
31. Road liable to be cut up. The materials of this road were bad; subject to be cut from November to May.
34. Prominent advantages. Laborers derive the chief advantage.
35. Principal market. Baltimore.
36. Benefits resulting. None perceptible.
37. Where place of business, and who president. Jacob Eichelberger, president, and resides in Hanover.
40. Best form of road. Convex.
41. Greater height of centre above the sides. Fifteen inches in the centre, and twelve inches at the sides.
42. Proper depth for materials. If hard materials, paved at the bottom and broke fine on the top, fifteen inches deep, sloping to twelve inches at the sides.

Hanover and Carlisle Turnpike Road Company.

1. Extent. Thirty miles.
2. Commences, at Hanover, in York county.
3. Terminates, at Carlisle, in Cumberland county.
4. Passes, through the town of Petersburg, over Conewago, Bermudian, Mountain and Yellow Breeches creeks; also over the Pigeon Hills and South mountain.
5. Begun, in the year 1812.
6. Completed. Not yet completed.
7. Proportion completed. Twenty miles.
8. When completion expected. In three years.
9. Unfinished spaces. At the northwest end.
10. Capital stock. 150,000 dollars.
11. Price and number of shares. 1500 shares, at 100 dollars per share.
12. Private subscriptions. 70,000 dollars.
13. State subscription. 10,000 dollars.
14. Cost. About 4,000 dollars per mile.
15. Contracts made. At 3,200 dollars per mile.
- *17. Materials. Stone.
18. Size of stones. Three inches in diameter.

- 20. Depth of materials. Twelve inches in the centre, and nine inches at the sides
- 21. Shape of road. Convex: three inches higher in the centre than at the sides.
- 22. Rate of tolls. A loaded wagon with broad wheels and four horses, 2 1-2 cents per mile; ditto, narrow wheels, do. 5 cents ditto.
- 23. Distance of gates apart. Five miles.
- 24. Number of managers. Twelve: number too great.
- 25. Average tolls, since erection of gates. 1,500 dollars.
- 26. Average tolls for three years. 1,666 dollars.
- 29. Debts. Nearly 30,000 dollars.
- 30. Market price of stock. No sales at present.
- 31. Road liable to be cut up. Yes, in March and April.
- 32. Quality of road. Smooth, except where it is new. About three-fourths over a level country.
- 33. Foundation of road. Generally hard.
- 34. Prominent advantages. An easy conveyance of produce to market, and leaving a surplus of the price of our produce in this state.
- 35. Principal market. Baltimore, by the Hanover and Carlisle, Hanover and Maryland line, Baltimore and Reysterstown turnpikes.
- 36. Benefits resulting. A sensible increase of population and improvement in the vicinity of the road, since its commencement.
- 19. Width. Twenty-one feet.
- 37. Where place of business and who president. Petersburg, John Bear, of Cumberland county, president.
- 38. Should broad wheels go free. No.
- 39. If not what exemption. One half.
- 40. Best form of a road. Convex.
- 41. Greater height of centre above the sides. Three inches.
- 42. Proper depth for materials. Fifteen inches in the centre.
- 43. Greatest safe load. Broad wheels, two tons; narrow wheels one ton.
- 44. Best size or weight of stones. Three inches diameter.
- 45. Were materials near or distant. Generally near.
- 46. Wages of turnpike laborers. One dollar—during last year, fifty cents.
- 47. Causes of the present cheapness of road making. Chiefly, the fall of wages and materials.

Harrisburg, Carlisle and Chambersburg Turnpike Road Company.

- 1. Extent. 48 miles 156 perches.
- 2. Commences, at the west end of the Harrisburg bridge, Cumberland county.
- 3. Terminates at Chambersburg, in Franklin county.
- 4. Passes through Carlisle, Shippensburg and Green Village;

over Silver's Spring, Letart, and the Shippensburg branch of the Conococheague creek, over each of which large stone bridges are erected.

5. Begun in the fall of 1816: commenced taking toll in 1818.

6. Completed, in the year 1820.

Note—In 1819, this company had exhausted all its resources, and were about \$16,000 in debt; at which time eight miles of the road were to be made, the only vacuum between Harrisburg and Pittsburg. In order that this part of the road should not retard the connexion of the whole route, individuals of the managers of the road, gave their capitals and credit to complete this section of the road. These debts are now pressing, as also the balances due workmen, and if aid is not granted from the legislature, those individuals who gave their capitals and credit, will have their remaining property taken from them, to satisfy the debts thus created for finishing the road. For what? For the public spirit, as their advantages were no more than what is common for all to enjoy.

10. Capital stock. Forty thousand dollars, to be raised by subscription.

11. Price and number of shares. 800 shares, at 50 dollars a share.

12. Private subscriptions. 80,000, about 5,000 of which supposed insolvent.

13. State subscription. 85,000 dollars, or 1,700 shares.

14. Cost. Average cost per mile, including bridges, \$4,256.

17. Materials. Limestone throughout the whole section, excepting about twenty rods of slate, which proved good for nothing.

18. Size of stones. Generally about three inches in diameter.

19. Width. Twenty-two feet.

20. Depth of materials. 14 inches in the centre and 12 inches at the sides, and rounding.

21. Shape of road. Nearly flat. It does not round more than three inches from the centre to the sides.

22. Rate of tolls. A loaded wagon with broad wheels and four horses, two cents a horse for five miles; ditto, with narrow wheels and four horses, three cents a horse, for five miles; a pleasure carriage, with two horses, nine cents for five miles.

23. Distance of gates apart. On the whole distance we have six gates erected.

24. Number of managers. On the 7th January 1822, one president, six managers and a treasurer were elected, which number is deemed sufficient. Previously, the number of managers was twelve.

25. Average tolls since erection of gates. Near 4,000 dollars.

26. Average tolls for three years. About 4,000 dollars.

29. Debts. From 35,000 to 40,000 dollars. This debt is owing to workmen, except such part of it as the managers are bound in their individual capacity to pay, on account of money borrowed to pay workmen. For this sum, suit, has been brought, and judgment obtained.

30. Market price of stock. No sales.
31. Road liable to be cut up. Not much, but most so between the months of November and May.
32. Quality of road. Smooth: country, generally speaking, level. No part exceeds an elevation of 3 degrees, except the hill at the Harrisburg bridge and one at Shippensburg.
33. Foundation of road. Hard. It was generally sunk six inches under grade.
34. Prominent advantages. To this neighborhood the advantage would be great, provided carrying of burdens was toll free. It would add considerably to the commerce of the cities of Philadelphia and Pittsburg; and would be one great mean of placing this state upon a footing with her sister states.
35. Principal market. The Susquehanna portion goes to Baltimore. Was the road free for wagons having broad wheels of a certain width, the produce would principally go to Philadelphia.
36. Benefits resulting. Population and improvement have increased in about the same proportion as in other parts of the country: if any difference, it is in favor of the road.
37. Where place of business and who president. Principally Carlisle. Benjamin Reynolds is president, and resides in Shippensburg.
38. Should broad wheels go free. Yes; so much has this company been impressed with this opinion, that a willingness exists to exempt broad wheels from toll, or at the most to exact no more than would be barely sufficient for repairs.
39. If not, what exemption. Narrow wheel wagons of heavy burden, ought to pay a heavy toll. The sooner they could be driven off the road the better, and no surer method could be devised than to free broad wheels.
40. Best form of road. A road made rounding, say about six inches higher in the centre than at the sides, would be about the gauge: sufficient to convey off the water.
42. Proper depth for materials. If good, experience has shown that fourteen inches will endure every pressure, and require but little repair.
43. Greatest safe load. With broad wheels, it is of little consequence what weight.
44. Best size or weight of stones. From 3 to 6 inches in diameter in the bottom; on the top, as small as they can conveniently be broken.
45. Were materials near or distant. Generally near at hand, taken from quarries opened for the purpose.
46. Wages of turnpike laborers. During the time this road was made, wages were from \$1 to \$1 25 per day.
47. Causes of the present cheapness of road making. The fall in the price of wages and materials, is the chief cause.

Harrisburg and Millerstown Turnpike Road Company.

To questions 1, 2, 3, and 5. The road commences at Harrisburg; ends at Millerstown. The location not fixed. Two routes contemplated. 1st, distance 26 miles 300 perches, crossing the Susquehanna above the mouth of Juniata river, and on east side of same to Millerstown, including breadth of Susquehanna and branch of same, 139 perches. By second route, crossing Juniata at Powers' Ferry; thence, on west side to Harrisburg, including the breadth of Juniata, and Harrisburg bridge, 32 miles.

Question 4. By either of said routes road passes no large town, and by first route no large hill; no mountain; crosses the Susquehanna and branch. Breadth of river 128 perches; of branch 11 perches, also Clark's creek, and Guin's creek, bridged. By 2d route, on the west side, passes Buffaloe hill (difficult) river Juniata, 52 perches, Harrisburg bridge and eight creeks, in breadth 86 perches. See draft of same, and full report by John Blair, Thomas Smith, &c. to the legislature, in 1819, filed in Secretary's office.

Questions 6, 7, 8, and 9. The road will most probably be completed next summer; has been viewed, and accurate survey made of same last fall.

Questions 10, 11, 12, and 13. Capital stock of company, including state appropriation of \$40,000, is \$65,000; individual stock of 500 shares of \$50 each, is \$25,000; whole, \$65,000.

Questions 14, 15, and 16. Contracts can probably be made including bridges, at about \$1,920 per mile, Susquehanna excepted; which river is excluded by law.

Questions 17, 18, 19, 20, 21, 22, and 23. Tolls are regulated by the law of 1806.

Questions 24. Managers are 12: six would be more convenient, after the location of the road.

Questions 25, 26, 27, 28, 29, 30, 31, and 32. Both the contemplated routes (excepting Buffaloe hill in 2d) will be generally level, passing near the river the whole distance.

Question 33. Bed of road generally gravel or stone.

Questions 34, and 35. The prominent advantages expected from said road are a safe and easy communication with Philadelphia and Baltimore, our places of market during the fall and winter seasons, when the rivers are either too low or frozen with ice.

Questions 36, and 37. Stated meetings held at Francis Beelin's. David W. Huling is the president, and resident in Lewis-town.

Questions 38, and 39. Wagons of nine-inch tire, or more, ought to be exempted from toll; they would, at least, not be injurious to the road, and the toll ought to be regulated according to the breadth of the tire. Perhaps the present tolls are right, till they reach nine inches. Drovers of cattle of every kind ought to be exempted from toll.

Questionous 40, 41, 42, 43, and 44. A road forming an arch of two inches from the centre would be most durable. Twelve inches in the centre and two inches at the extremes, of stone well pounded, any of which would pass through a three-inch ring, are sufficient; when the bed of the road is in wet ground, 18 inches or more would not be too much; but if the road is formed of gravel alone, twelve or fifteen inches would be required, and the arch from the centre about four inches.

Question 45. Materials, gravel or stone, are near and in the bed of the road.

Question 46. Wages of a good hand, when found, during the last summer, per month, from eight to ten dollars.

Question 47. The price of provisions and labor is the cause of the cheapness in making roads at present. We know of few improvements.

Question 48. The improvements have been, in levelling, the greater use of the plough and scraper, and in passing hollows or sidling ground, extending the breath of the road instead of building walls. Greater skill in location, and managers not becoming contractors, and selling at reduced prices to labourers.

Hibernia Turnpike Road Company.

1. Extent. Eighteen miles.
2. Comences, between the 3d and 4th mile stone, on the Ephrata and Harrisburg turnpike, in Chester county.
3. Terminates, at the sign of the Cross Keys, in Lancaster county.
4. Passes, through no towns; crosses the Brandywine and Pequea creeks.
5. Begun, in the year 1814.
7. Proportion completed. Near five miles.
9. Unfinished spaces. In Lancaster county and part of Chester county.
10. Capital stock. Twenty-five thousand dollars.
11. Price and number of shares. 50 dollars a share.
12. Private subscriptions. By individuals 200 shares, being ten thousand dollars.
13. State subscription. None.
14. Cost. About 2000 dollars per mile.
16. Contracts could be made. For about 2000 dollars per mile.
17. Materials. Stone.
18. Size of stones. About four inches diameter.
19. Width. Twenty-one feet.
20. Depth of materials. 15 inches in the centre, and 12 at the sides.
21. Shape of road. Convex: three inches higher in the centre than at the sides.
23. Distance of gates apart. None erected.

25. Number of managers. Ten : number not too great.
 29. Debts. About two thousand dollars.
 31. Road liable to be cut up. The materials are of the best kind and not liable to be much cut up.
 32. Quality of road. The greater part through a level country.
 33. Foundation of road. Hard.
 34. Prominent advantages. The advantages to the Pequea farmers would be very great, if the road were completed, there being no other turnpike passing through it.
 35. Principal market. Philadelphia.
 36. Benefits resulting. Population and improvement have increased.
 37. Where place of business, and who president. At the sign of the Compass, Chester county. Col. James Boyd, president, and resides in Salisbury.
 38. Should broad wheels go free. We think not.
 39. If not, what exemption. One third.
 40. Best form of road. Convex.
 41. Greater height of centre above the sides. We think six inches.
 42. Proper depth of materials. It will depend upon the manner in which the road is made, and the kind of materials employed.
 43. Greatest safe load. Three tons weight.
 45. Were materials near or distant. Quite convenient on the whole route.
 46. Wages of turnpike laborers. About 50 cents a day.
 47. Causes of the present cheapness of road making. Owing to the fall in the price of wages.
- ☞ The managers were obliged to discontinue the work, on account of a few of the stockholders not paying their instalments. They commenced suits in the year 1815 ; and the matter is now depending before the supreme court. We expect a decision in May next.

Huntingdon, Cambria and Indiana Turnpike Road Company.

1. Extent. Eighty miles.
2. Commences, at the borough of Huntingdon, in Huntingdon county.
3. Terminates, at the east bank of Conemaugh river, in Indiana county.
4. Passes through the towns of Huntingdon, Smithfield, Alexandria, Frankstown, Hollidaysburg, Munster, Ebensburg, Shoupsburg, Armagh and Blairsville. It crosses the Juniata river at Huntingdon, near Alexandria, and at Hollidaysburg, which the company are not obliged by law to bridge, neither have they funds for the purpose, although very essential for the interest of the road. The other streams are all small and bridged, except the Big Conemaugh river, at the west end of the road, for which a company is

incorporated and now engaged in the work. The mountains and hills are the Warrior Ridge, Tussey's mountain, Canoe mountain, Allegheny mountain, Laurel hill and Chesnut Ridge, the second and third of which are passed by water gaps, and the others are of easy ascent: not more than nine miles and an half of the whole road coming up near to the limits of the law, viz: five degrees, and no part exceeding it.

5. Begun, in the year 1815.

6. Completed, in the year 1821.

10. Capital stock. 65,000 dollars to be subscribed by individuals, exclusive of the state appropriations.

11. Price and number of shares. 50 dollars per share. 1,238 shares subscribed by individuals, and 3,437 by the state.

12. Private subscriptions. 61,900 dollars; of which sum \$12,261 52 are yet unpaid, \$5,950 10 of which will be lost.

13. State subscription. 171,850 dollars, which has all been paid.

14. Cost. All the contracts for making the road have been settled, which, with the incidental expenses at present ascertained, will amount to \$3,435 90 per mile. There are few incidental expenses not yet ascertained.

17. Materials. The paved part is composed of broken stone the summer, or side, roads of gravel or clay.

18. Size of stones. 3 inches diameter, according to contracts.

19. Width. Twenty-two feet.

20. Depth of materials. Thirteen inches in the centre, and twelve inches at the sides.

21. Shape of road. Convex: the centre but one inch higher than the sides.

22. Rate of tolls. Fixed by the 12th section of the act of February 24th, 1806, for making a turnpike road from the west bank of Susquehanna, opposite Harrisburg, to Pittsburg.

23. Distance of gates apart. We have six gates at ten miles distance from each other upon an average; two of seven miles and an half, and one that collects tolls five miles.

24. Number of managers. Twelve managers and a president. Half the number would answer, and would diminish the expenses considerably.

25. Average tolls, since erection of gates. Tolls commenced at the first gate, January 23, 1817. On the 1st day of January, 1821, there had been received \$11,726 27½. The expenses of toll-houses, gate-keepers and repairs, to same time, was \$6,583 98½. From January, 1821, to January, 1822, there was received \$5,838 25; and the expense of toll-houses, gate-keepers and repairs, for same time, amounted to \$4,367 60.

29. Debts. \$35,009 62½: to which is to be added some incidental expenses.

30. Market price of stock. The market price of stock is not easily determined. The price varies, according to the necessity of the seller, from one half to less than one third of the nominal value.

31. Road liable to be cut up. Our road is not liable to be much cut up by wagons. The greater part of it is formed of the best materials. It is most liable to be cut after being frozen, when the frost is coming out, and all other times in proportion to the moisture on the surface.

32. Quality of road. It is like all new roads as yet, somewhat rough in several places; particularly the parts last made. The parts first made would have been smooth by this time, were it not that the road is almost entirely travelled by narrow wheeled wagons. The last member of this question answered in the 4th.

33. Foundation of Road. The foundation upon which the road rests, is generally hard: all the soft ground it passes over would not amount to two miles, and that not of the worst kind.

34. Prominent advantages. The most prominent advantages derived to our neighborhood from our road, are an increased demand for all the agricultural productions of the country; an easy, cheap, and safe conveyance of the surplus products of agriculture and manufactures to market; particularly the iron of Huntingdon and Centre counties that now is carried to Pittsburg, for from 20 to 30 dollars per ton, which, before the making of the road, cost from fifty to eighty dollars; and had that state of things continued to the present time, would have stopped the trade altogether, as the article now sells in Pittsburg for little more than ninety dollars per ton. Some of the advantages to be derived to the state, are, that our road is a considerable portion of that route which passes between the two principal trading cities of the state, nearer to the middle of it than any other road can be made: that the singular circumstances of that route following the openings made by the Susquehanna and Juniata rivers, from Harrisburg to the Allegheny mountains, easily ascending the same, and from thence passing along the dividing ridge between the waters of the west branch of the Susquehanna and those of Conemaugh river, to the crossings of the latter, gives this route an infinite advantage, in point of levelness, over any other which can be found between the said points. To which may be added, that the trade once entered on this road, can never leave the state. To the north, there is no inducement; and to the south, the mountains will for a long time prevent the public spirit of a neighboring state from reaching it with their turnpikes.

35. Principal market. The principal market for the agricultural produce of this country, for a number of years past, has been at the iron works in the county of Huntingdon; but as the pressure of the times has greatly curtailed that business, a large portion of the produce is now designed for an eastern market; and as the eastern part of the northern route turnpike is not yet finished, will have to be transported by water down the Juniata and Susquehanna; part of which will go by land from Columbia to Philadelphia, but the larger portion will go by water to Baltimore.

36. Benefits resulting. There has been an increase of population, but much more of improvement, in the vicinity of our road, since it was commenced.

37. Where place of business, and who president. The managers meet at different places along the route, as suits best the business they have to transact. Much of the current business is done by the president. John Blair is the president, and resides at Blair's Gap, in Huntingdon county, near the east side of Allegheny mountain, and on the road.

38. Should broad wheels go free. We do consider the advantages to a turnpike road from the use of broad wheeled wagons, sufficiently great to entitle them to an exemption from tolls, in case they roll six inches or more, and are prevented from locking.

40. Best form of road. We consider that new turnpikes should have but little curvature. All turnpike roads become higher in the middle by frequent repairing, and if made so at first, they soon become dangerous. On curved roads the greatest weight is thrown upon the weakest part of the road, and not acting perpendicularly to the horizon, they are more subject to be cut through. At the same time increasing the friction, and thereby adding to the draft and wear of carriages.

41. Greater height of centre above the sides. We believe not more than three inches.

42. Proper depth of materials. Where the foundation is solid clay, stone, or gravel, we believe that twelve inches in depth of good stone, is sufficient for any road. Where the ground is soft, making a foundation with unbroken stone, we consider a good plan; and in very deep swamps, where timber would sink so as to be covered from the air, we have made foundations of logs, and built the road upon them. But in both cases, the whole should be covered with the proper depth of broken stone.

43. Greatest safe load. Narrow wheels will injure a road with the lightest load, and the injury is always in proportion to the increased weight. Wagons with narrow wheels now commonly carry two tons and upwards, without cutting our road through, except in some few places, where soft materials were used in making. The greatest injury they do, is when loaded, they lock on hills, tear up the pavement, and destroy the breaks for turning off the water, which occasions the road to be washed with rains, and become rough. But few broad wheeled wagons have travelled our road. The few that have passed along it have done it no harm; and we believe that broad wheeled wagons, such as mentioned in the answer to No. 38, might carry from three to four tons, without injury, so as they avoided locking.

44. Best size or weight of stones. Stones for paving a road, should never be larger than three inches diameter, and broken regularly from the bottom; and the surface knapped, if possible, to the size of one inch, or less.

45. Were materials near or distant. The materials for our road were generally convenient, mostly within a quarter of a mile of the place they were used, and seldom exceeding half a mile.

46. Wages of turnpike laborers. When our road was commenced, the wages of turnpike laborers was from seventy-five cents to one dollar per day when found; during the last year, from fifty cents to sixty-two cents and an half.

47. Causes of the present cheapness of road making. The present comparative cheapness of road making, is occasioned, in part, both by the fall of wages and by improved skill in the application of labor; but more than either, by the cheapness of provisions, and the great numbers who have engaged in the business, by which a competition has been excited.

48. Improvements in road making. We know of no machines or tools lately invented, for saving labor in the business of road making; but long experience has made the workmen more expert in the use of the old.

Indiana and Ebensburg Turnpike Road Company.

1. Extent twenty-six miles.
2. Commences, at the west end of Ebensburg, Cambria county.
3. Terminates, at the west end of the borough of Indiana, Indiana county.
4. Passes over part of the Allegheny mountain, Laurel Hill and Chesnut Ridge, and over the waters of Black-Lick, Yellow creek and Two-lick creeks.
- 5, 6, 7, 8 and 9. Begun, &c. Has been contracted for, and to be completed within the present year.
10. Capital stock. See the act of incorporation.
11. Price and number of shares. Original price 25 dollars; 500 shares required previous to incorporation.
12. Private subscriptions. 14,325 dollars subscribed by individuals; but it is not ascertained what amount will be paid in, not having all been yet demanded.
13. State subscription. 12,000 dollars.
17. Materials. Clay, stone and gravel.
18. Size of stones. Three inches in diameter.
19. Width. Twenty-six feet.
20. Depth of materials. Twenty-two inches, graduated to the sides.
24. Number of managers. Twelve, and the number not considered too great.
29. Debts. None, at present.
30. Market price of stock. Not known; no sales being effected.
33. Foundation of road. Generally hard.
34. Prominent advantages. The increase of settlement, and the facility of transporting produce to the eastern market.
35. Principal market. The iron works in Huntingdon county, by the route of the Huntingdon, Cambria and Indiana turnpike road.

36. Benefits resulting. The population is increasing in the neighborhood through which the road will pass, in consequence of its location.

37. Where place of business, and who president. In the borough of Indiana. John Douglass, Esq. is president, pro tempore, and resides in the same.

40. Best form of road. Convex.

41. Greater height of centre above the sides. About four degrees.

42. Proper depth of materials. Fourteen inches of stone, and twenty-two inches of clay.

44. Best size or weight of stones. From four to five pounds, thereby compelling the laborer to break them fine.

45. Materials near or distant. Generally on the ground.

47. Causes of the present cheapness of road making. Occasioned partly by a fall in the price of labor and materials, and partly by improvements in the skill and economy of applying them.

48. Improvements in road making. The use of ploughs, scrapers and oxen, in the construction of clay roads.

Lancaster, Elizabethtown and Middletown Turnpike road company.

1. Extent. About 26 miles.

2. Commences, at Lancaster, in the county of Lancaster.

3. Terminates, at Middletown, in the county of Dauphin.

4. Passes, through Mountjoy and Elizabethtown, and over Big and Little Chicques and Swatara creeks, and over the Conawago Hills.

5. Begun, in the year 1805.

6. Completed, in the year 1812.

10. Capital stock. Fifteen hundred shares, at \$ 100 each, amounting to 15,000 dollars.

11. Price and number of shares. One hundred dollars a share and 1500 shares.

12. Private subscriptions. 674 shares, amounting to \$ 67,400.

13. State subscription. 100 shares, amounting to 10,000 dollars.

14. Cost. \$4,506 per mile, including bridges.

17. Materials. Principally limestone.

18. Size of stones. About four inches in diameter.

19. Width. Twenty-one feet.

20. Depth of materials. Twelve inches in the centre, and nine inches at the sides.

21. Shape of road. It is convex: nine inches higher in the centre than at the sides.

[illegible]

7/16 11:00 AM - 12:00 PM - 12:00 PM - 12:00 PM

7/4 Dungeness & Stratigote. 1st.

7/11 1/2 page 10, 10000000 of page. About 7,000 dollars

4/11. A. 140 mg. 1/12 & 1/13 1/14 1/15 1/16 1/17 1/18 1/19 1/20 1/21 1/22 1/23 1/24 1/25 1/26 1/27 1/28 1/29 1/30 1/31 1/32 1/33 1/34 1/35 1/36 1/37 1/38 1/39 1/40 1/41 1/42 1/43 1/44 1/45 1/46 1/47 1/48 1/49 1/50 1/51 1/52 1/53 1/54 1/55 1/56 1/57 1/58 1/59 1/60 1/61 1/62 1/63 1/64 1/65 1/66 1/67 1/68 1/69 1/70 1/71 1/72 1/73 1/74 1/75 1/76 1/77 1/78 1/79 1/80 1/81 1/82 1/83 1/84 1/85 1/86 1/87 1/88 1/89 1/90 1/91 1/92 1/93 1/94 1/95 1/96 1/97 1/98 1/99 1/100 1/101 1/102 1/103 1/104 1/105 1/106 1/107 1/108 1/109 1/110 1/111 1/112 1/113 1/114 1/115 1/116 1/117 1/118 1/119 1/120 1/121 1/122 1/123 1/124 1/125 1/126 1/127 1/128 1/129 1/130 1/131 1/132 1/133 1/134 1/135 1/136 1/137 1/138 1/139 1/140 1/141 1/142 1/143 1/144 1/145 1/146 1/147 1/148 1/149 1/150 1/151 1/152 1/153 1/154 1/155 1/156 1/157 1/158 1/159 1/160 1/161 1/162 1/163 1/164 1/165 1/166 1/167 1/168 1/169 1/170 1/171 1/172 1/173 1/174 1/175 1/176 1/177 1/178 1/179 1/180 1/181 1/182 1/183 1/184 1/185 1/186 1/187 1/188 1/189 1/190 1/191 1/192 1/193 1/194 1/195 1/196 1/197 1/198 1/199 1/200 1/201 1/202 1/203 1/204 1/205 1/206 1/207 1/208 1/209 1/210 1/211 1/212 1/213 1/214 1/215 1/216 1/217 1/218 1/219 1/220 1/221 1/222 1/223 1/224 1/225 1/226 1/227 1/228 1/229 1/230 1/231 1/232 1/233 1/234 1/235 1/236 1/237 1/238 1/239 1/240 1/241 1/242 1/243 1/244 1/245 1/246 1/247 1/248 1/249 1/250 1/251 1/252 1/253 1/254 1/255 1/256 1/257 1/258 1/259 1/260 1/261 1/262 1/263 1/264 1/265 1/266 1/267 1/268 1/269 1/270 1/271 1/272 1/273 1/274 1/275 1/276 1/277 1/278 1/279 1/280 1/281 1/282 1/283 1/284 1/285 1/286 1/287 1/288 1/289 1/290 1/291 1/292 1/293 1/294 1/295 1/296 1/297 1/298 1/299 1/300 1/301 1/302 1/303 1/304 1/305 1/306 1/307 1/308 1/309 1/310 1/311 1/312 1/313 1/314 1/315 1/316 1/317 1/318 1/319 1/320 1/321 1/322 1/323 1/324 1/325 1/326 1/327 1/328 1/329 1/330 1/331 1/332 1/333 1/334 1/335 1/336 1/337 1/338 1/339 1/340 1/341 1/342 1/343 1/344 1/345 1/346 1/347 1/348 1/349 1/350 1/351 1/352 1/353 1/354 1/355 1/356 1/357 1/358 1/359 1/360 1/361 1/362 1/363 1/364 1/365 1/366 1/367 1/368 1/369 1/370 1/371 1/372 1/373 1/374 1/375 1/376 1/377 1/378 1/379 1/380 1/381 1/382 1/383 1/384 1/385 1/386 1/387 1/388 1/389 1/390 1/391 1/392 1/393 1/394 1/395 1/396 1/397 1/398 1/399 1/400 1/401 1/402 1/403 1/404 1/405 1/406 1/407 1/408 1/409 1/410 1/411 1/412 1/413 1/414 1/415 1/416 1/417 1/418 1/419 1/420 1/421 1/422 1/423 1/424 1/425 1/426 1/427 1/428 1/429 1/430 1/431 1/432 1/433 1/434 1/435 1/436 1/437 1/438 1/439 1/440 1/441 1/442 1/443 1/444 1/445 1/446 1/447 1/448 1/449 1/450 1/451 1/452 1/453 1/454 1/455 1/456 1/457 1/458 1/459 1/460 1/461 1/462 1/463 1/464 1/465 1/466 1/467 1/468 1/469 1/470 1/471 1/472 1/473 1/474 1/475 1/476 1/477 1/478 1/479 1/480 1/481 1/482 1/483 1/484 1/485 1/486 1/487 1/488 1/489 1/490 1/491 1/492 1/493 1/494 1/495 1/496 1/497 1/498 1/499 1/500 1/501 1/502 1/503 1/504 1/505 1/506 1/507 1/508 1/509 1/510 1/511 1/512 1/513 1/514 1/515 1/516 1/517 1/518 1/519 1/520 1/521 1/522 1/523 1/524 1/525 1/526 1/527 1/528 1/529 1/530 1/531 1/532 1/533 1/534 1/535 1/536 1/537 1/538 1/539 1/540 1/541 1/542 1/543 1/544 1/545 1/546 1/547 1/548 1/549 1/550 1/551 1/552 1/553 1/554 1/555 1/556 1/557 1/558 1/559 1/560 1/561 1/562 1/563 1/564 1/565 1/566 1/567 1/568 1/569 1/570 1/571 1/572 1/573 1/574 1/575 1/576 1/577 1/578 1/579 1/580 1/581 1/582 1/583 1/584 1/585 1/586 1/587 1/588 1/589 1/590 1/591 1/592 1/593 1/594 1/595 1/596 1/597 1/598 1/599 1/600 1/601 1/602 1/603 1/604 1/605 1/606 1/607 1/608 1/609 1/610 1/611 1/612 1/613 1/614 1/615 1/616 1/617 1/618 1/619 1/620 1/621 1/622 1/623 1/624 1/625 1/626 1/627 1/628 1/629 1/630 1/631 1/632 1/633 1/634 1/635 1/636 1/637 1/638 1/639 1/640 1/641 1/642 1/643 1/644 1/645 1/646 1/647 1/648 1/649 1/650 1/651 1/652 1/653 1/654 1/655 1/656 1/657 1/658 1/659 1/660 1/661 1/662 1/663 1/664 1/665 1/666 1/667 1/668 1/669 1/670 1/671 1/672 1/673 1/674 1/675 1/676 1/677 1/678 1/679 1/680 1/681 1/682 1/683 1/684 1/685 1/686 1/687 1/688 1/689 1/690 1/691 1/692 1/693 1/694 1/695 1/696 1/697 1/698 1/699 1/700 1/701 1/702 1/703 1/704 1/705 1

Wm. H. B. Co., 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917, 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949, 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999, 1001, 1003, 1005, 1007, 1009, 1011, 1013, 1015, 1017, 1019, 1021, 1023, 1025, 1027, 1029, 1031, 1033, 1035, 1037, 1039, 1041, 1043, 1045, 1047, 1049, 1051, 1053, 1055, 1057, 1059, 1061, 1063, 1065, 1067, 1069, 1071, 1073, 1075, 1077, 1079, 1081, 1083, 1085, 1087, 1089, 1091, 1093, 1095, 1097, 1099, 1101, 1103, 1105, 1107, 1109, 1111, 1113, 1115, 1117, 1119, 1121, 1123, 1125, 1127, 1129, 1131, 1133, 1135, 1137, 1139, 1141, 1143, 1145, 1147, 1149, 1151, 1153, 1155, 1157, 1159, 1161, 1163, 1165, 1167, 1169, 1171, 1173, 1175, 1177, 1179, 1181, 1183, 1185, 1187, 1189, 1191, 1193, 1195, 1197, 1199, 1201, 1203, 1205, 1207, 1209, 1211, 1213, 1215, 1217, 1219, 1221, 1223, 1225, 1227, 1229, 1231, 1233, 1235, 1237, 1239, 1241, 1243, 1245, 1247, 1249, 1251, 1253, 1255, 1257, 1259, 1261, 1263, 1265, 1267, 1269, 1271, 1273, 1275, 1277, 1279, 1281, 1283, 1285, 1287, 1289, 1291, 1293, 1295, 1297, 1299, 1301, 1303, 1305, 1307, 1309, 1311, 1313, 1315, 1317, 1319, 1321, 1323, 1325, 1327, 1329, 1331, 1333, 1335, 1337, 1339, 1341, 1343, 1345, 1347, 1349, 1351, 1353, 1355, 1357, 1359, 1361, 1363, 1365, 1367, 1369, 1371, 1373, 1375, 1377, 1379, 1381, 1383, 1385, 1387, 1389, 1391, 1393, 1395, 1397, 1399, 1401, 1403, 1405, 1407, 1409, 1411, 1413, 1415, 1417, 1419, 1421, 1423, 1425, 1427, 1429, 1431, 1433, 1435, 1437, 1439, 1441, 1443, 1445, 1447, 1449, 1451, 1453, 1455, 1457, 1459, 1461, 1463, 1465, 1467, 1469, 1471, 1473, 1475, 1477, 1479, 1481, 1483, 1485, 1487, 1489, 1491, 1493, 1495, 1497, 1499, 1501, 1503, 1505, 1507, 1509, 1511, 1513, 1515, 1517, 1519, 1521, 1523, 1525, 1527, 1529, 1531, 1533, 1535, 1537, 1539, 1541, 1543, 1545, 1547, 1549

21. Market price of stock. Fluctuating from 60 to 80 dollars, according to circumstances, very little selling.

It flows a little to the east up. Yes, in the spring season.

ed, quality of road. It is as turnpikes generally are when roads improved, it is rough. The country over which it passes is partly level and some part hilly.

Population of road. Generally hard.

44. **Prominent advantages.** The great facility of transporting all kinds of produce to market; and its connexion with the great road leading to Pittsburg, must be an object of great importance to the western section of the state.

an. Principal market. Philadelphia, by way of the Lancaster and Philadelphia turnpike.

and the benefits resulting. Considerable improvements have been made along the road, by the farmers building houses, &c. adjacent thereto; and the erection of several towns, through which it passes.

Where place of business, and who president. Lancaster, where George Crandall, Esq. the present president, resides.

should broad wheels go free. No

4. If not, what exemption. See the difference in the toll ex-
posed from the two, in answer to question 23.

41) That form is a real Convex.

41. Water height of centre above the sides. From six to ~~ten~~

d. Proper depth for materials. From twelve to sixteen inches according to the situation and quality of the ground over which the mine passes.

at present and have about four more for a time while
higher & a number of other members are present.

[illegible]

at Washington and in 1927. Some were taken at ~~the~~
the same time as the others in 1927.

一、《说文解字》：许慎著，系统分析汉字字形、字义、字音的著作。

to 80 cents per perch. What the laborers' wages were sixteen years ago, cannot at present be stated with any degree of certainty.

47. Causes of the present cheapness of road making. The managers have no knowledge of roads being made cheaper now than at any antecedent period, except the fall in the price of wages and materials. The expenses of making turnpikes depend much upon the situation of the ground, the waters the road passes over, and the facility of procuring materials.

48. Improvements in road making. When this road was made, which was the next after the Philadelphia turnpike, the undertakers thereof were unacquainted with the manner of making it, and no doubt, in many instances, undue advantages were taken, which increased the expenditures; and, no doubt, other roads may have been made much cheaper since, in consequence of the managers deriving some knowledge from those previously made,

Lancaster & Susquehanna Turnpike Road Company.

1. Extent. Ten miles.
2. Commences, at the line of the city of Lancaster.
3. Terminates, at the line of the borough of Columbia.
4. Passes, through Mount Pleasant; over Little Conestogo creek, and over a large stream, Shawn's run, which turns Stricler's mill, both requiring large and expensive bridges.
5. Begun, in the year 1801.
6. Completed, in the year 1803.
10. Capital stock. 51,000 dollars.
11. Price and number of shares. 300 dollars per share; the number of shares, 170.
12. Private subscriptions. 48,000 dollars subscribed and paid by individuals and corporations: 2,700 dollars owned by the company.
13. State subscription. Nothing.
14. Cost. 5,816 dollars per mile, including a bridge over Little Conestogo and one over Shawn's run.
17. Materials. Limestone, hill and flint stones.
18. Size of stones. Three inches in diameter.
19. Width. Twenty-one feet.
20. Depth of materials. Twelve inches in the centre and nine inches at the sides: probably increased by annual repairs.
21. Shape of road. Convex, and is three inches higher in the centre than at the sides.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, 3 cents and 8 mills per mile; with narrow wheels and four horses, 7 cents and 5 mills per mile; a pleasure carriage with two horses, 3 cents and 8 mills; a single man and horse, 9 mills per mile.

fact and solid road, but wears so as to be blown by the winds, and becomes thin, and of course will require expensive repairs.

34. Greatest safe load. Satisfactory answers to this and the following queries cannot be given.

Lewistown and Huntingdon Turnpike Road Company.

1. Extent. The exact extent of the road contemplated by the charter of incorporation, from the court house in Lewistown, to intersect the Huntingdon and Cambria and Indiana turnpike road at Huntingdon, cannot at present be ascertained; but it will not vary much from 32 miles. The route of the road has been several times explored and surveyed, but the real track of the whole way has not yet been agreed upon.

2. Commences, at the court house in Lewistown.

3. Terminates, at the intersection of the Huntingdon, Cambria and Indiana turnpike road, at the west end of Huntingdon.

4. Passes, through the town of Waynesburg, a flourishing village on the bank of the river, Juniata in the county of Mifflin; and over Brightfield's run, Brown's run, Holliday's run, Culbertson's run three times; Beaver dam run, Two-log run, and Drake's run, in the county of Mifflin; Mill creek, and Stone creek, in the county of Huntingdon; all of which will require bridging, besides a number of smaller streams, and over no large hills.

5. Begun. Not yet commenced.

8. When completion expected. It is expected that the road will be completed before the end of the present year.

10. Capital stock. A portion of the \$60,000, appropriated by the act of assembly of 24th March, 1812. By act of 26th March, 1821, the governor is authorized to subscribe 340 shares, at fifty dollars each. And six hundred and eleven shares by individuals, at fifty dollars a share.

12. Private subscriptions. 30,550 dollars.

14. Cost. A section of 5 miles has been contracted for by individuals, in sections of a quarter of a mile each, to be completed on or before the 10th day of July next, at an average price of \$4 52 per perch.

16. Contracts could be made. It is presumed that, excepting bridging, contracts could be made for making the residue of the road at a rate not far exceeding that which has already been contracted for.

17. Materials. When made, it will be composed altogether of stone.

18. Size of stones. To pass through a three inch ring.

19. Width. It is intended to open the road fifty feet wide, twenty-two feet to be covered with pounded stone.

20. Depth of materials. In hard ground, twelve inches in the centre and ten inches at the sides, and thicker in proportion as the ground may be softer.

21. Shape of road. Convex, agreeably to law, (see 10th section of the act of 24th March, 1806, which is the law by which we are governed) two inches higher in the centre than at the sides.

22. Rate of tolls. See the act of assembly, of 24th March, 1806.

23. Distance of gates apart. It is contemplated that gates shall be erected at equi-distances, of ten miles.

24. Number of managers. One president and twelve managers elected by the stockholders, and five appointed by the legislature, by section seven of act of assembly of 31st March, 1821. By far too many. The state managers live at too great a distance, and giving them notice is troublesome and expensive. They have no individual interest in this company. It takes ten persons to form a quorum, when five would be much better for the expedition of business, and be far less expensive.

31. Road liable to be cut up. When the road shall be completed, it will be made over hard ground, and the stones in the vicinity of the best quality for making a durable road. Our experience can give no other answer to this question.

32. Quality of road. Generally level, with small undulations, with a moderate acclivity and declivity.

33. Foundation of road. Hard.

34 Prominent advantages. To our immediate neighborhood we believe the advantages will be very great. The adjacent country is fertile and populous, composed of agriculturalists and the manufacturers of their products. An increased number of travellers will give to the farmer, the grazier, the miller, the distiller, and many mechanics, a home market for many of their disposable products and articles. It will render to them an easy, safe, and cheap carriage to market at all seasons of the year, of all their surplus products. Whereas at the present time, the farmer, the iron manufacturer, the miller, distiller, &c. are confined to a water carriage for a small portion of the year only, and that at a time of the year when the markets for similar articles are generally glutted and over-stocked. It will enable the farmer and mechanic to purchase their foreign necessities cheaper than at present; inasmuch as when the great northern turnpike road shall be completed, the price of carriage of goods from Philadelphia to the interior, will be greatly diminished, and of course the retailer be enabled to sell to his customers at prices less than at present. Our road, though but a short distance, is an absolute necessary link in the chain of the northern turnpike road from Harrisburg to Pittsburg. When the road shall be completed, we believe the advantage derived to the state will be immense. It will cause an increased number of travellers to pass through our state, creating a home market for many articles. It will facilitate the settlement and improvement of the middle, west, and north-west parts of the state. It will

secure to the Philadelphia market a much greater portion of the produce of this part of the country than she can otherwise expect. For unless a good permanent road can be had by land to market, the owners of produce will be compelled to keep it in warehouses till a suitable situation of the market presents itself, and then float it to Baltimore. It will enable the iron masters to send their iron to Pittsburg, cheaper than at present, and by the return wagons bring large quantities of glass and other articles manufactured there.

35. Principal market. Baltimore and Philadelphia. Generally by water down the Juniata and Susquehanna river in arks and keel boats.

37. Where place of business, and who president. Waynesburg, Mifflin county. Elias W. Hale, president, residing in Lewistown, Mifflin county.

40. Best form of road. We think a flat road would be the most durable. The pressure of the wheels on both sides of a wagon will be equal; if convex, unequal, and the greatest pressure on the wheels most depressed, and of course on the thinnest part of the road. This causes deepest ruts on the thinnest part of the road, and by this means the road is soon out of repair. If it should be objected, that roads being mostly passed in the middle, a flat road will soon become hollow in the middle, and become a course for the water, we answer, that all roads require repairs for a number of years after the commencing of travelling upon them, and should the fact be that they become hollow in the middle, that hollow should be constantly filled with pounded stones, until it becomes a mass so solid as to become nearly impossible to be acted upon by any common loaded wagons. It is said that roads should be convex, in order that the water may freely pass off at each side. Experience, however, shews us that in convex as well as flat roads, the water will follow the wagon ruts until it reaches the most depressed part of the road, and then pass off.

44. Best size or weight of stones. As to size, so small as to pass through a three inch ring.

45. Were materials near or distant. Will be generally at hand: in some few places from one half to a mile distant.

46. Wages of turnpike laborers. From ten dollars to thirteen dollars per month, and found in boarding and washing.

47. Causes of the present cheapness of road making. Partly from both; but chiefly from preventing speculators having any part in the contracts: by selling the making of the road to individuals in sections of not more than one fourth of a mile to each, and not suffering him to undertake any more until that is completed, and assurances that he shall be faithfully paid, some as the road progresses, and in full when it is completed.

Little Conestogo Turnpike Road Company.

1. Extent. Twenty-one miles.
2. Commences, near the 20th milestone, on the Philadelphia and Lancaster turnpike road, in Chester county.
3. Terminates, at the Churchtown and Blue-Ball turnpike, near Morgantown, in Berks county.
4. Passes, through no towns; over but one stream of water, about sufficient to turn a mill, and over no hill of any consequence, except the North Valley hill, which is of easy ascent.
5. Begun, in the year 1812.
6. Completed, in the year 1816.
10. Capital stock. Fifteen thousand dollars, with power to increase it.
11. Price and number of shares. Three hundred shares, at \$50 each.
12. Private subscriptions. 28,375 dollars.
13. State subscription. 10,000 dollars.
14. Cost. 2,523 dollars per mile.
17. Materials. Hard stones, thinly covered with clay.
18. Size of stones. Our contracts were that the stones should be well broke, and so small on the top as to pass through a 2½ inch ring.
19. Width. Twenty feet.
20. Depth of materials. Fifteen inches in the centre, and nine inches at the sides, as per contracts.
21. Shape of road. Convex.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, two cents per mile; ditto, with narrow wheels and four horses, four cents; a pleasure carriage with two horses, two cents; a single man and horse, three cents per mile.
23. Distance of gates apart. Five miles.
24. Number of managers. Twelve, which we think is too many by five.
25. Average tolls, since erection of gates. 723 dollars.
26. Average tolls for three years. 700 dollars.
29. Debts. 16,625 dollars.
31. Road liable to be cut up. Not much, the foundation being hard.
32. Quality of road. Reasonably smooth, and tolerably level.

33. Foundation of road. Hard.

34. Prominent advantages. It facilitates, the carriage of our produce to market, and opens a valuable communication with the Grert Valley and the Little Conestogo, by which our neighborhood is much improved.

35. Principal market. Philadelphia.

36. Benefits resulting. An increase of population and improvement, in the vicinity of the road.

37. Where place of business, and who president. At the inn of Jacob Ludwick. Thomas Bull is president, and resides near the 16 mile stone, on our road.

38. Should broad wheels go free. We believe not.

39. If not what exemption. It will depend on the breadth of the tire.

40. Best form of road. Convex.

41. Greater height of centre above the sides. Not less than nine inches, at the first.

41. Proper depth for materials. We believe about eight inches in the centre.

43. Greatest safe load. On broad wheels, from three to four tons, and on narrow wheels from thirty to forty cwt.

44. Best size or weight of stones. On a hard foundation, from six to eight inches, and decreasing towards the top, until they will pass through a $2\frac{1}{2}$ inch ring.

45. Were materials near or distant. Generally near at hand.

46. Wages of turnpike laborers. About one dollar per day, at the commencement of the road, and now fifty-five cents.

Luzerne and Wayne Turnpike Road Company.

1. Extent. Twenty-six miles.

2. Commences, at Providence, in Luzerne county.

3. Terminates, at Palmyra, in Wayne county, according to the law; but a petition has been presented praying for an alteration of the place of termination, that would shorten the distance of the turnpike about six miles.

4. Passes, through the townships of Blakely, Salem and Palmyra, and over the Moose mountain.

5. Begun in the year 1821.

10. Capital stock. Twelve hundred shares, at \$25 each \$30,000.

11. Price and number of shares. Twenty-five dollars per share, and 612 shares.

12. Private subscriptions. 612 shares.

16. Contracts could be made. At 1000 dollars per mile.

24. Number of managers. Ten.

83. Foundation of road. It will be hard, when made.

34. Prominent advantages. It will give the settlement at each end of the route, a good road into the Belmont and Easton turnpike road, so that they can transport their produce to Easton and Philadelphia. It will bring a great number of travellers from other states a distance of three hundred miles through the state of Pennsylvania, which will make a cash market for a large quantity of produce in the vicinity where they pass. It will give to the citizens of Luzerne county a good road to transport their stone coal, which they have in abundance, to New York and New Jersey, where firewood is scarce.

35. Principal market. Easton, down the Belmont and Easton turnpike road.

37. Where place of business, and who president. At different places; Ebenezer Slocum, president, resides at Providence, Luzerne county.

40. Best form of road. Convex.

41. Greater height of centre above the sides. Eighteen inches

42. Proper depth for materials. Ten inches.

44. Best size or weight of stones. In marshy ground, large stone at the bottom, and small on top.

46. Wages of turnpike laborers. Thirteen dollars per month.

47. Causes of the present cheapness of road making. The fall in the price of labor and materials, and improvements in the skill and economy of applying them, combined.

Manchester Turnpike Road Company.

1. Extent. Three miles.

2. Commences, at Liverpool, in York county.

3. Terminates, at York, in York county.

4. Passes, through the river gut, and through no towns]

5. Begun. I cannot tell.

7. Proportion completed. None.

8. When completion expected. I expect never.

11. Price and number of shares. I think \$25.

Marietta and Mountjoy Turnpike Road Company.

1. Extent. Five miles.
2. Commences, in the borough of Marietta, Lancaster county.
4. Terminates, in the villages of Springfield and Mountjoy, Lancaster county.
5. Begun, in the spring of 1814.
6. Completed, in July 1815.
13. State subscription. Nothing.
14. Cost. 3,233 dollars per mile.
17. Materials. Generally limestone.
18. Size of stones. About three inches in diameter.
19. Width. Twenty-one feet.
20. Depth of materials. Twelve inches in the centre, and nine inches at the sides.
21. Shape of road. Convex: about nine inches higher in the centre.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, 3 1-3 cents; ditto, with narrow wheels and four horses, 6 2-3 cents; a pleasure carriage with two horses, 3 1-3 cents; a single man and horse, 1 cent, per mile.
23. Distance of gates apart. There is but one gate.
24. Number of managers. Eight managers. Not too great.
25. Average tolls, since erection of gates. Five hundred and twenty-nine dollars per annum.
26. Average tolls for three years. Four hundred and fifty-five dollars per annum.
29. Debts. About 8,000 dollars, including interest, due.
30. Market price of stock. No sale.
31. Road liable to be cut up. In some parts, during the spring of the year.
32. Quality of road. Somewhat rough and hilly.
33. Foundation of road. About one half not very hard.
37. Where place of business, and who president. In the borough of Marietta. No president, at present.
38. Should broad wheels go free. Certainly not.
39. If not, what exemption. About three fourths.
40. Best form of road. Convex.

- 41. Greater height of centre above the sides. At least nine inches.
- 42. Proper depth for material. Not less than fifteen inches, on good foundation.
- 45. Were materials near or distant. Near at hand.
- 46. Wages of turnpike laborers. About one dollar per day.
- 47. Causes of the present cheapness of road making. Produced by the fall in the price of wages and materials, and by improvements in the skill and economy of applying them.

Mercer and Meadville Turnpike Road Company.

- 1. Extent. Twenty-nine miles.
- 2. Commences, at Mercer, in Mercer county.
- 3. Terminates, at Meadville, in Crawford county.
- 4. Passes, through Georgetown, and over Otter creek, Shenango creek, Sandy creek, Coniaut creek, and French creek. There are no large hills in the course of the road.
- 5. Begun, in May, 1818
- 6. Completed, in November, 1821.
- 10. Capital stock. Nine hundred shares.
- 11. Price and number of shares. Seven hundred and twenty-one shares, at \$25 per share.
- 12. Private subscriptions. \$18,025.
- 13. State subscription. \$19,666 66 2-3.
- 14. Cost. 960 dollars per mile, exclusive of incidental expenses: that amount being paid contractors.
- 17. Materials. Wood, clay and gravel.
- 19. Width. Twenty feet.
- 20. Depth of materials. Centre two feet, sides eighteen inches.
- 22. Rate of tolls. A loaded wagon, with broad wheels (twelve inches) and four horses, 6 cents for 5 miles; ditto, with narrow wheels, (under four inches) 25 cents for 5 miles; a pleasure carriage with two horses, 12½ cents for 5 miles; a single man and horse, 6 cents for 5 miles.
- 24. Number of managers. Twelve managers and a president. Number too large: five or seven sufficient.
- 25. Average tolls, since erection of gates. We have not taken tolls regularly, and only for a few sections, and those only a few months, some parts are not yet licensed.

26. Average tolls, for three years. Have no means of estimating.

27. Annual dividend, since road commenced. None—tolls not sufficient to keep up the road.

29. Debts 6,704 dollars.

30. Market price of stock. No sales.

31. Road liable to be cut up. Yes, in the spring and fall.

32. Quality of road. Smooth: country level.

33. Foundation of road. Generally hard and good,

34. Prominent advantages. To our neighborhood, it forms an outlet for produce of every kind to the lakes; and for the transportation of salt, fish, &c. from the lakes to us; which is not only done in a shorter time, but a team can haul near three times the weight. The state will have a good road to transport military supplies in time of war, from the military depots at Pittsburg, Erie, Meadville, &c. such transportation being thereby very essentially facilitated.

35. Principal market, Erie and Pittsburg, and the different iron and salt works.

36. Benefits resulting. A sensible increase of population and improvement in the vicinity of the road, since it commenced.

37. Where place of business, and who president. In Mercer. A. Brown, president, resides in Mercer.

38. Should broad wheels go free. Yes, if from 12 to 15 inches in width.

39. If not what exemption. As 10 hundred to 15 hundred.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. Six inches.

42. Proper depth for materials. No depth, less than the length of the spokes, will prevent narrow wheels from cutting through.

43. Greatest safe load. Ten cwt. on narrow wheels and fifty cwt. on broad wheels.

45. Were materials near or distant. Near at hand.

46. Wages of turnpike laborers. At commencement, one dollar; now, fifty cents.

47. Causes of the present cheapness of road making. Produced, in part, by a fall in the price of wages and materials. and in part, by improvements in the skill and economy of applying them.

48. Improvement in road making. Knowledge acquired in working the road, more than by any newly invented machinery. It is by working hands to better advantage, planning better &c.

Orwigsburg, March 8th, 1822.

SIR: In reply to yours of the 25th ult. I can only say that the law passed, during the session of 1814-15, for the erection of a turnpike, called the Mill creek turnpike, has expired, inasmuch as the company never commenced operations.

I am, respectfully, your
Obedient servant &c.

FRANCIS B. NICHOLS.

Milford and Owego Turnpike Road Company.

1. Extent. Eighty-nine miles.
2. Commences, at the 43d milestone, on the north line of the state, in Bradford county.
3. Terminates, at Milford, in Pike county, on the Delaware river.
4. Passes, through Montrose and Milford, the county towns of Susquehanna and Pike counties, and over Tunkhannock, Lackawana and Wallenpanpack creeks, together with many smaller streams, and over the Moosic mountain.
5. Begun, in 1809.
6. Completed. Not yet completed.
7. Proportion completed. Sixty-seven miles.
8. When completion expected. In 1822, in June.
9. Unfinished spaces. Between Dundaff, in Susquehanna county, and Wilsonville, in Pike county.
10. Capital stock. Not limited.
11. Price and number of shares. Twenty-five dollars a share.
12. Private subscriptions. 62,250 dollars.
13. State subscription. 31,000 dollars.
14. Cost. 1,800 per mile.
15. Contracts made. At 900 dollars per mile, exclusive of bridges.
16. Contracts could be made. All contracted for.
17. Materials. Gravelly loam, generally, hard pan, and stone in some places.
18. Size of stones. Where of stone, it is coated with gravel.
19. Width. About 22 feet, exclusive of ditches or side drains.
20. Depth of materials. Arch about 18 inches generally.

21. Shape of road. Convex: the height of the arch mentioned in the answer to the last question.

23. Distance of gates apart. Not yet finally regulated.

24. Number of managers. One president and twelve managers. Managers too numerous: eight supposed to be better.

25. Average tolls since erection of gates. But few gates, another erected lately.

27. Annual dividend since road commenced. No dividend: toll appropriated to repairs and payment of debts.

29. Debts. About 14,000 dollars.

30. Market price of stock. None in market.

31. Road liable to be cut up. Liable to be cut in the spring.

32. Quality of road. Rather hilly, but the road very smooth.

33. Foundation of road. Generally hard.

34. Prominent advantages. The neighborhood of the road is much benefited by the promotion of the settlement and general improvement of the country, and by a good communication with the seaboard: and the state benefited by the consequent prosperity of the country.

35. Principal market. In consequence of the rapid settlement of the country, the agricultural produce has been consumed in it, excepting cattle; they have been drawn to Philadelphia. It is expected the surplus produce will hereafter be sent to Philadelphia by the Delaware river, by the way of Milford and Easton. The road intersects the Belmont and Easton turnpike, thirty miles S. E. of Montrose, from Montrose to Easton, about eighty-five miles.

36. Benefits resulting. A very rapid improvement, and great increase of population.

37. Where place of business and who president. The business is done at Montrose, Susquehanna county. The president is Robert H. Rose, Esq. who resides at Silver Lake, Susquehanna county.

38. Should broad wheels go free. Yes, if more than twelve inches wide.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. Eighteen inches, or more.

42. Proper depth of materials. Our road does not cut, except in the spring; the natural soil generally of the best quality for a road.

45. Were materials near or distant. Road made generally of the natural soil.

46. Wages of turnpike laborers. Cannot say as it has all been made by contract.

47. Causes of the present cheapness of road making. In part the reduction in the price of wages and materials, and in part, improved skill and economy in the application of labor and materials.

48. Improvements in road making. Consist in the general knowledge of road making,

Millerstown and Lewistown Turnpike Road Company,

1. Extent. Twenty-six miles.
2. Commences, at Millerstown, Perry county.
3. Terminates, at Lewistown, Mifflin county.
4. Passes, through Thompsontown, Mexico and Mifflintown, over no large streams.
5. Begun, in 1821.
7. Proportion completed. Five miles nearly completed, and ten more in considerable progress, say half made.
8. When completion expected. In 1822. The whole is sold, on the condition that it should be finished on or before the 1st of September next.
9. Unfinished spaces. Having commenced at each end, the middle was the last sold, and the work not commenced.
10. Capital stock. About 60,000 dollars.
11. Price and number of shares. 400 shares, at 50 dollars per share, taken by individuals.
12. Private subscriptions. By individuals and companies, 70,000 dollars.
13. State subscription. By act of 1812, 26,000 dollars: by act of 1821, 13,500 dollars.
14. Cost. About 2000 dollars per mile, including bridges.
15. Contracts made. At the above rate.
16. Contracts could be made. The road is all sold.
17. Materials. Stone and gravel.
18. Size of stones. The conditions upon which the road was sold requires the stone to be broken to pass through a three inch ring.
19. Width. Twenty-two feet.

20. Depth of materials. When the ground is good twelve inches in the centre and ten at the sides, and thicker where the ground is soft.

21. Shape of road. Convex: two inches from the centre to each side.

22. Rate of tolls. The road is not finished—no rates of tolls fixed on.

23. Distance of gates apart. None yet erected.

24. Number of managers. A president and twelve managers. Six managers would be better.

25. Debts. No settlements made.

26. Market price of stock. None has been offered for sale.

27. Road liable to be cut up. Not subject, as the ground over which the road passes, and the stone of which it is formed, are good.

28. Quality of road. The road will be smooth and level, there not being two miles out of twenty-six, that reaches as high as three degrees.

29. Foundation of road. Generally hard.

30. Prominent advantages. It will render the farmer an easy passage to market at any season of the year, which he is now confined to a water carriage of two months; advantage the state by opening a principal road convenient to unimproved lands in the northwestern part of the state, and will promote this settlement, and will secure the trade to Philadelphia and within the state, which will otherwise go to Baltimore; and will bring in and fill home markets with many articles which we are deprived of by the inconvenience of not having a good road, &c.

31. Principal market. At present Baltimore, in part, for want of a good road to Philadelphia.

32. Benefits resulting. Our opportunities will not enable us to answer with certainty; but so far as we can judge from public sentiment, much is to be expected.

33. Where place of business, and who president. At Mifflintown. David Reynolds, president, resides at Lewistown.

34. Should broad wheels go free. We conceive that all should go free, that roll six inches and upwards.

35. If not what exemption. Tolls should be exacted from narrow wheels with heavy burdens, so as to prohibit their passage, as they work the destruction of the road.

36. Best form of road. Convex: two inches in 22 feet.

37. Greater height of centre above the sides. Two inches, in 22 feet.

38. Proper depth for materials. This depends on the foundation: from 12 to 18 inches, may be necessary.

43. Greater safe load. Three tons, on wheels of five inches and upward: on four inch tire, a ton; and so down.

44. Best size or weight of stones. The under lay through a four inch, and the upper half through a three inch ring.

45. Were materials near or distant. At an average of eighty perches.

46. Wages of turnpike laborers. From ten to thirteen dollars per month, when found in boarding.

47. Causes of the present cheapness of road making. The cheapness of making our section is owing in part to the fall of wages and provisions, but principally to the manner of its execution.

48. Improvements in road making. The principal advantages arise from furnishing all necessary provisions and tools, and keeping in repair, from the commencement of the work, and by keeping an eye to the progress of the work, and not requiring the one half or whole of the contract to be finished without advances, thereby enabling the poor industrious man to procure a contract as well as the rich: thus increasing the number of contractors, so as to prevent combinations, by which speculations have been heretofore effected, to the great injury of the state and of public improvements.

Morgantown, Churchtown and Blue Ball Turnpike Road Company.

1. Extent. Ten miles.

2. Commences, at the upper end of the Little Connestogo turnpike, in the county of Berks.

3. Terminates, at its intersection with the Downingtown and Harrisburg turnpike road, near the Blue Ball tavern, in the county of Lancaster.

4. Passes, through Morgantown, Churchtown, and crosses the head waters of the Conestogo.

5. Begun, in the spring of 1815.

6. Completed, in 1818.

10. Capital stock. Eight hundred shares, at fifty dollars per share.

12. Private subscriptions. About two hundred shares.

13. State subscription. One hundred and eighty shares.

14. Cost. Three thousand dollars per mile.

18. Materials. Stone, broken to pass through a three inch ring.

19. Width. Twenty feet.
20. Depth of materials. Fifteen inches in the centre, and nine inches at the sides.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, 2½ cents per mile; ditto, with narrow wheels and four horses, 5 cents per mile; a pleasure carriage with two horses, two cents per mile; a single man and horse, one half cent per mile.
23. Distance of gates apart. There is but one gate erected, about the centre of the road.
24. Number of managers. The affairs of the company are conducted by twelve managers: this number is conceived to be one half too great.
25. Average tolls, since erection of gates. About \$400 per annum.
28. Annual dividend for three years. No dividends have yet been declared.
29. Debts. \$4,233 71.
30. Market price of stock. Five dollars per share.
31. Road liable to be cut up. Not much, at any time.
32. Quality of road. It is tolerably smooth, and passes through a level country.
33. Foundation of road. Generally hard.
35. Principal market. Philadelphia, through the most fertile parts of Lancaster and Berks counties.
36. Benefits resulting. There has been considerable improvement in the vicinity of the road, since its commencement.
37. Where place of business, and who president. Churchtown. The present president, Robert Jenkins, resides at Windsor Forge, Lancaster county.
38. Should broad wheels go free. We consider the advantages resulting from the use of broad wheels, sufficiently great, to entitle them to exemption from tolls.
40. Best form of road. Convex.
41. Greater height of centre above the sides. Six inches.
42. Proper depth of materials. On a hard foundation, fifteen inches in the centre, and nine inches at the sides.
43. Greatest safe load. On broad wheels, three tons; on narrow wheels, two tons.
44. Best size or weight of stones. Three inches in diameter.
45. Were materials near or distant. Near at hand.

46. Wages of turnpike laborers. About one dollar per day.

47. Causes of the present cheapness of road making. The principal cause, in our opinion, is the fall of wages and materials.

New Alexandria and Conemaugh Turnpike Road Company.

1. Extent. Nine miles and ninety-one perches.
2. Commences, at Louhannah creek, in Westmoreland county.
3. Terminates, at Conemaugh river, the line between Westmoreland and Indiana counties.
4. Passes, through New Alexandria and Bardstown; crossing no large streams, nor any hills of note.
5. Begun, in the year 1818.
5. Completed, in the year 1820.
10. Capital stock. 7,500 dollars.
11. Price and number of shares. 150 shares, at \$50 each.
12. Private subscriptions. 16,000 dollars subscribed. \$9,820 52½ paid: \$1,104 78½ may perhaps be collected: \$5,192 68½ no prospect of being collected.
13. State subscription. 16,000 dollars.
14. Cost. \$8,789 77 per mile.
17. Materials. Generally of gravel and good hard stone.
18. Size of stones. Three inches in diameter.
19. Width. Twenty-two feet.
20. Depth of materials. Thirteen inches in the centre, and twelve inches at the sides.
21. Shape of road. Convex.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, two cents and four mills per mile; ditto, with narrow wheels and four horses, three cents and two mills per mile; a pleasure carriage with two horses, two cents and five mills per mile; a single man and horse, six mills per mile.
23. Distance of gates apart. There is but one gate erected upon our section of road.
24. Number of managers. A president, a treasurer and twelve managers. Number two great.
25. Average tolls since erection of gates. \$387,79 3-8.

27. Annual dividend since road commenced. No dividend has been made, the company being in debt. The toll moneys, as well as many small sums, have been advanced to pay debts due to contractors.

29. Debts. \$9,038 46.

30. Market price of stock. No sales.

31. Road liable to be cut up. Our road, as yet, has been no expense for repairs.

32. Quality of road. Exceedingly smooth.

33. Foundation of road. Generally hard.

34. Prominent advantages. I do not feel competent to point out the particular advantages at present, either to our neighborhood or state at large: but if the road, of which ours is a part, be made free to travellers, I believe it would induce a much greater number to make use of it. Merchants and others from neighboring states, as well as a large portion of the citizens of our own state, would find it to their advantage to conduct their carrying trade upon it, on account of its being the shortest and most level route from Philadelphia to the navigation of the rivers Ohio and Allegheny. It would also encourage our agricultural and manufacturing pursuits, by enabling our farmers to carry their produce to a market within our own state.

35. Principal market. The city of Baltimore, chiefly by cross ways.

36. Benefits resulting. A considerable increase of population and improvement in the vicinity of the road, since its commencement.

37. Where place of business, and who president. The business is chiefly done in New Alexandria. Moses Murphy is the president, and resides one mile from town.

38. Should broad wheels go free. We are of opinion that while the road is new, the use of them is no injury to it.

40. Best form of road. Convex.

41. Greater height of centre above the sides. We are of opinion that six inches would not be too much, and would prefer to have the curvature formed in preparing the bed of the road.

42. Proper depth for materials. Twelve or thirteen inches.

43. Greater safe load. Narrow wheels do carry from 45 to 50 cwt.

44. Best size or weight of stones. Three inches in diameter.

45. Were materials near or distant. Generally within one quarter of a mile.

46. Wages of turnpike laborers. One dollar per day, when our road was making.

47. Causes of the present cheapness of road making. The cheapness of labor and produce.

New Holland Turnpike Road Company.

1. Extent. Fifteen miles and 26 perches.
2. Commences, at the Blue Ball tavern, at the Downingtown, Ephrata and Harrisburg turnpike, Lancaster county.
3. Terminates, at the city of Lancaster, in the county of Lancaster.
4. Passes, through the village of New Holland, crosses Conestogo river, at Binkley's bridge: passes over no hills.
5. Begun, in the year 1813.
6. Completed. Not completed yet.
7. Proportion completed. The first section of five miles is completed and licensed. Ten miles and one hundred and twenty-one perches are completed in detached parts, including first section.
8. When completion expected. That depends entirely on the procurement of funds. It could be completed in at least one year, if funds were convenient.
9. Unfinished spaces. Different points, between the end of the first section and the city of Lancaster.
10. Capital stock. Thirty thousand dollars.
11. Price and number of shares. One hundred dollars each share: 300 shares.
12. Private subscriptions. 23,000 dollars.
13. State subscription. 10,000 dollars, in two different subscriptions. Of the first subscription, say 5000 dollars, the one-third was paid. The two third parts are withheld until the second and third sections will be completed.
14. Cost. Ten dollars per perch, within a small fraction.
15. Contracts made. One contract made since April, 1821, at six dollars per perch, where there are no bridges to be made.
16. Contracts could be made. At about the same price, exclusive of bridges.
17. Materials. Stone and gravel.
18. Size of stones. The lower half depth, to pass through a ring six inches diameter, and the upper half depth, through a three inch diameter ring.
19. Width. Twenty-one feet.
20. Depth of materials. Eighteen inches the centre; twelve inches the sides:
21. Shape of road. Convex.
22. Rate of tolls. Broad wheels and four horses, $2\frac{1}{2}$ cents per mile; narrow wheels and four horses, five cents per mile; pleasure carriage and two horses, $2\frac{1}{2}$ cents per mile; a single horse, 3 cents per mile.

23. Distance of gates apart. Five miles.

24. Number of managers. Eight managers, one president, and one treasurer. The number not too great, as the managers and president have rendered their services to this time, gratis.

25. Average tolls since erection of gates. Between six and seven hundred dollars per annum, being but one gate.

27. Annual dividend since road commenced. None. The proceeds of the gate were applied to making and repairing the road, and paying interest on debts.

29. Debts. \$1,949 44.

30. Market price of stock. No sale.

31. Road liable to be cut up. Narrow wheeled wagons cut up the road, in particular in the early part of the spring.

32. Quality of road. It is as smooth as a road made of limestone could be expected, and very level.

33. Foundation of road. Hard.

34. Prominent advantages. The advantages derived by the neighborhood and state, are many. That part of Lancaster county through which it leads, being extensively and very valuably improved, with numerous merchant mills, on the waters of Conestoga river, Cocalico creek, Mill creek, and Lititz creek, which get their supply of wheat for merchant work, from Columbia and Marietta which, connected with the grain raised in the county, through which the road leads and the little Conestoga creek and Chicques creeks, mills and settlement, all falling in with this road at Binkley's bridge, the vast influx of lumber and stone coal to supply the entire north-easterly section of Lancaster county, and the Brandywine settlements, which, without this road, would be considerably retarded. Any trade connected with the waters of the Susquehanna, will add to the advantages of the state at large.

35. Principal market. Philadelphia, by way of this road and the Downingtown, Ephrata and Harrisburg road, from Blue Bell tavern to the old Lancaster and Philadelphia turnpike.

36. Benefits resulting. The section of Lancaster county through which this road leads, has been, and still continues to be, an object for improvements and population, which road would naturally aid in the more rapid increase of those objects.

37. Where place of business, and who president. Samuel Geber is the president of the road, living in Leacock township, Lancaster county, and the business of said board is generally done at the public house now kept by Michael Johns, situate on said road in Leacock township aforesaid, (called Leacock Post Office.)

38. Should broad wheels go free. The difference between the broad wheel wagons and narrow wheeled wagons' toll is not well

proportioned, under the present law of incorporation. If the broad wheels would be reduced and narrow wheels raised, perhaps would do better; but as to total exemption of toll for broad wheels, we do not understand the logic thereof.

39. If not, what exemption. Broad wheels, say four inches, one-fourth, and any wheels less than four inches, three-fourths toll.

40. Best form of road. That must be owing to the situation and character of the ground, on which the road is made. A soft bed of the road would naturally require a flat road; that is, the surface flat, and the convexity thereof as much as the road should be deeper in the middle, turned down, which would form an arch and keep the stones packed. Whereas hard ground with a shoulder at each side, the road would certainly dry sooner to have the convex part uppermost.

41. Greater height of centre above the sides. One-third. Any more would keep the stones lying loose, and work rapid towards the sides, where they would become useless.

42. Proper depth for materials. This is easily solved. The deeper the materials are laid on, the longer it will wear without being cut. Such part of our road which was well made, eighteen inches the centre, and twelve inches the sides, we perceive not any cutting up. The great difficulty rests with the getting of the roads made according to contract.

43. Greatest safe load. Three tons, broad wheels, would injure the road less than one and a half ton on a narrow wheeled wagon would. That ought to be proportioned with the rate of tolls. See No. 38.

44. Best size or weight of stone. That would be owing to the depth of the materials intended to be laid on the road. If less depth than eighteen inches the centre, and twelve inches the sides, the stones ought all to be broke to run through a three inch diameter ring; otherwise the wheels would turn up the larger stones, and spoil the road: but where the road is of that depth, the lower part may be of a six inch diameter ring.

45. Were materials near or distant. The farthest hauling of stones, about one mile; the greater part more convenient.

46. Wages of turnpike laborers. When this road was commenced, labor in the fall and winter, was fifty cents per day, for such labor as is generally to be done on turnpike roads: that would be thirteen dollars per month, and found in boarding and lodging. The last year, you could get as good hands for the one half of that price.

47. Causes of the present cheapness of road making. It is owing to the fall of grain and the articles of clothing, which occasioned the fall of labor. A laboring man can supply himself and family with bread and clothing as well with twenty-five cents now as he could with fifty cents per day in those fanciful times of spe-

culations. We know of no machinery which could be applied for the purpose of quarrying, breaking or hauling stones, other than we knew of on former occasions.

Perkiomen and Reading Turnpike Road Company

1. **Extent.** Twenty-eight miles and sixty-five perches, with the privilege of extending the turnpike about one hundred perches within the limits of the town of Reading, if the managers think proper.

2. **Commences,** at the Perkiomen bridge, in Montgomery county.

3. **Terminates,** at Reading, in Berks county.

4. **Passes,** through Trapp, and Pottstown, and over Manatawny creek, and crosses no hills of any importance on its route.

5. **Begun,** March 22, 1811.

6. **Completed,** November 15, 1815, with the exception of a bridge still to be built over Bishop's creek.

7. **Proportion completed.** See preceding answer.

8. **When completion expected.** This will depend altogether on the future funds of the company, and is entirely uncertain.

9. **Unfinished spaces.** The bridge to be built, is at Bishop's creek, five miles below Reading.

10. **Capital stock.** 100,000 dollars.

11. **Price and number of shares.** The price of a share was fifty dollars, and there was subscribed, at different times, 2,685 shares.

12. **Private subscriptions.** 133,000 dollars.

13. **State subscription.** 53,000 dollars.

14. **Cost.** Nearly 7,000 dollars per mile.

15. **Contracts made.** No contracts have been made for constructing any additional section of the road.

16. **Contracts could be made.** The bridge over Bishop's creek it is supposed, would cost about 2,500 dollars, if built in the present times.

17. **Materials.** Stone, of various kinds and qualities, according to the nature of the soil through which the road passes.

18. **Size of stones.** According to the original contracts, the stones were to be broken so as to pass through a ring of two inches and a half in diameter, in every direction; but this part of the contract was not very faithfully observed.

19. **Width.** The paved part of the road was to have been 18 inches in depth over the whole surface.

20. Depth of materials. Answered above.

21. Shape of road. Convex, forming a regular curve, rising six inches in the centre.

22. Rate of tolls. A loaded wagon with broad wheels (four inches) and four horses, three cents per horse for five miles; ditto, with narrow wheels (under four inches) and four horses, five cents per horse, for five miles; a pleasure carriage with two horses, 7½ cents per horse for five miles; a single horse, four cents for five miles.

23. Distance of gates apart. About seven miles.

24. Number of managers. A president and twelve managers. The number is unnecessarily great.

25. Average tolls since erection of gates. The average amount of tolls per annum, since the last gate was erected, say six years, has been \$10,663 02.

26. Average tolls for three years. \$9,856 49.

27. Annual dividend since commencement of road. Three half yearly dividends, at the rate of six per cent. per annum, were stricken on the first ten miles of the road, in the years 1812-13. But no dividend has been made since the remainder of the road was begun.

28. Annual dividend for three years. None.

29. Debts. About 56,000 dollars.

30. Market price of stock. Wholly unsaleable. The stockholders would probably all sell out at the rate of 20 dollars, per fifty dollars paid, or perhaps much lower.

31. Road liable to be cut up. Our road is very much cut up in the months of November and March. At these seasons the weather is moist, and a number of narrow wheel wagons are out on the road, and more damage is generally done to the turnpike, than during all the rest of the months together.

32. Quality of road. Owing to the necessity of repairing the road so frequently, it is kept generally pretty rough. The hills along it are numerous, but not high.

33. Foundation of road. The greater part of the road is constructed over a loose red-shell soil.

34. Prominent advantages. The Perkiomen and Reading turnpike is an outlet for the produce of a very fertile district of country, and forms a material link in the great chain of turnpike road with which it is intended to connect Philadelphia with Erie. It is also a connecting link in the turnpike roads which pass from Harrisburg, through Lebanon and Reading, to Philadelphia.

35. Principal market. Philadelphia.

36. Benefits resulting. The country was thickly settled before the road was made, and has increased by natural causes, but not in any extraordinary degree from artificial ones.

38. Should broad wheels go free. A wagon tracking four inches, the dimensions of the broad wheels that travel our road, when loaded with 120 bushels of wheat, or three tons or three and a half tons of merchandize, are nearly as injurious to our road as a narrow wheel wagon. It is probable they would prove less injurious to turnpikes constructed of harder stone. The company would cheerfully exempt wheels tracking seven inches, from tolls.

39. If not, what exemption. This will depend on the breadth of the wheel. The difference between a wheel tracking two inches and one tracking four, would certainly not be one half.

40. Best form of road. We conceive a convex road to be preferable. The drier a turnpike can be kept, the less it is liable to be cut up, and particularly so in the spring, when the frost is coming out of the ground. The shade of a single tree will often make a difference at that season.

41. Greater height of centre above the sides. Such a curvature should be attained if possible, as would keep the road dry, and at the same time not endanger vehicles that are obliged to turn out and pass each other on the road: say from six to nine inches higher in the middle than at the sides.

42. Proper depth of materials. It is supposed that fifteen inches of well broken stone in the centre of the road would be amply sufficient.

43. Greatest safe load. Three and a half tons are often transported on our road with five and six horse teams. But the road suffers from the weight. Lighter loads would certainly be much less injurious.

44. Best size or weight of stones. The finer the stone is broken the better, provided the materials are hard. The weight must depend on the greater or less density of the specimen, and would vary according to the nature of the stone.

45. Were materials near or distant. The five miles below Reading, the stone were near the road: after which they were brought from a distance of from one to three miles.

45. Wages of turnpike laborers. Our road was given out by contracts, and was made principally during the war; the wages at that time were one hundred per cent. higher than at present.

47. Causes of the present cheapness of road making. Not having made any road lately, we cannot answer this question satisfactorily. The expense of repairing the road has been reduced principally from the pressure of the times, the consequent competition of laborers and the owners of quarries, &c.

48. Improvements in road making. Answered in No. 47.

Philadelphia and Great Bend Turnpike Road Company.

1. Extent. A little over sixty-three miles, as measured and staked out.

2. Commences, near the 30th milestone, on the Wilkesbarre and Easton turnpike, Northampton county.

3. Terminates, near Ithamer Mott's, on the Coshecton and Great Bend turnpike, Susquehanna county.

4. Passes, not through any village, but through the townships and counties following, viz. through Tobyhanna township, *Northampton county*; through Middle Smithfield township, *Pike county*; through Covington, Pittston, Providence and Abington townships, in *Luzerne county*; and through Nicholson, Harford and New Milford townships, in *Susquehanna county*. It crosses Long pond creek, the Tunkhanna, the Tobyhanna, the Lehigh, Deep Hollow creek, the Lackawannock, and the south, middle, and north branches of the Tunkhannock; it passes over some hills near this latter stream, then through a gap in the Lackawannock mountain, made by Leggetts creek, and through a gap made by the Deep Hollow creek, in the Moosic or Cobb's mountain. The other streams are small, being branches of the foregoing; and the hills are trifling, the route being uncommonly level and good.

5. Begun. A small part of the road was begun in December last.

6, and 7. Completed, &c. None.

8. When completion expected. Thirty-two miles are contracted for, to be completed by first of November, 1822.

10. Capital stock. 75,000 dollars.

11. Price and number of shares. 1,500 shares, at fifty dollars per share.

12. Private subscriptions. Not exactly known, part depending on contingencies.

13. State subscription. 12,000 dollars.

14 and 15. Cost, &c. The thirty-two miles, including bridges, now contracted for, will average, per mile, less than 800 dollars.

16. Contracts could be made. In cash (including bridges) \$600 per mile; in our mode of payment, say one-third cash, one-third land, and one-third stock, or company's obligations, redeemable when sufficient toll may be received, it will cost \$900 per mile. On this subject I may observe, that a loan of eight or nine thousand dollars would enable us to complete the whole road by the first November, 1823; and that I am authorised by our board of managers to negotiate a loan to this amount. The loan to bear an interest of six per centum, to be called for in equal proportions,

upon the completion and inspection of the governor's committee, of any five miles, of a specific and described distance of twenty-six miles not yet contracted for, to the construction of which this loan is solely to be applicable. In security for the redemption of which and punctual payment of its annual interest, I am authorized to pledge the toll on 40 miles of the road; deducting only therefrom the necessary repairs, &c. of the road, and any dividend that may arise in favor of the commonwealth. I have made application in the city of Philadelphia, but hitherto without success. However good and sufficient the security that may be offered, yet the citizens will scarce ever listen to a proposition from the interior of the state, and particularly if any thing like a turnpike is talked of. Not one single share of our stock has been taken in Philadelphia. The want of liberality and public spirit in one quarter, has enhanced the value of the aid given us by the commonwealth. The commonwealth is much interested in our succeeding in such arrangement, and so much so, that if it were earlier in the session, I should be in favor of petitioning the legislature for aid, founded on undeniable evidence of advantage to the finances of the state, as well as general benefits. From offers that have been made, we have no doubt but that we can make the residue of the road (for cash) at \$600 per mile. Neither have we any doubt of its costing us full \$900 per mile, unless further aided. The saving of three hundred dollars per mile in the construction of the residue of the road is an immense saving to the stockholders, amongst which, is the commonwealth, to the amount of \$12,000. The value of the stock and future dividends will be much affected by this. We believe that if we negotiate this loan, we shall succeed in making the road at an average of \$700 per mile, for its total distance; and we think that no other road, in Pennsylvania, of similar materials and construction, has been made at so low a rate. I have taken much pains in examining the state of some other companies, who were, at the completion of their road, encumbered with corporate debts, and have found that they were extinguished with a rapidity greater than I had pre-supposed. Amongst others was the Coshecton and Great Bend road. In aid of my application in Philadelphia, I accompanied it with statements of this kind, tendering to shew an abundant security for the speedy re-payment of the loan and its interest. But I believe it is in vain, being every where encountered by a prejudice against turnpike companies, founded on a knowledge of some whose cost per mile was from five to even ten times the amount of ours. I am persuaded that the commonwealth would not have this prejudice, but by examining the simple facts in our particular case, would teach a true result. Our state is this: we can give security, but want credit amongst monied men. The credit of the commonwealth, I presume, would enable her to borrow at five per cent. on good security, of which she would not only be the best judge, but have a greater control than any individual. We would borrow at six per cent. Would the legislature be likely to load us eight or nine thousand dollars, on the terms and in the manner heretofore stated?

17, 18, 19, 20, and 21. Materials, &c. Where the ground is suitable, it will be what is generally known as a ploughed and scraped road. This is where the substratum is a mixture of clay and gravel or hardpan, or any other compact and durable earth.

The substratum will form the surface of the road, and be packed together in a solid manner, forming a covering of at least six inches in thickness. In this no stone will be used. In soft places, the road will be bedded with stone or sound timber. In some places, also, the road will be made of stone. In this case the stones to the depth of four inches, will be broken so as to pass through a ring of 24 inches in diameter in every direction, and then covered with suitable earth or gravel three inches deep, forming a curve rising six inches in the centre. On level ground, where the road is ploughed and scraped, the centre will rise to fifteen inches.

On side hill road or dug way, the road from the centre to the lower side will be nearly level. The width of the road covered with materials will be twenty feet. The total width of the road will be eighty feet.

22. Rates of toll. Our rates of toll are the same as the Co-shecton and Great Bend turnpike, as may be seen in their act of incorporation, passed in 1804, to which I must beg leave to refer you in answer to this query, as I have it not at hand to refer to.

23. Distance of gates apart. Cannot as yet be answered.

24. Number of managers. A president and twelve managers. At present, perhaps, not too great, but after the completion of the road the duties will be less arduous, and a less number, in my opinion, might answer.

25, 26, 27 and 28. Average tolls, &c. Cannot as yet be answered.

29. Debts. No part of the road being yet completed, there are no debts of the company, except for services rendered by managers and some trifling items. The present and late managers have been disposed to wait for their pay until the road is fairly completed, and all other corporate debts discharged. Every economy, consistent with the best interests of the road, it is believed, has been carefully studied.

30. Market price of stock. Cannot with any certainty be stated at present.

31. Road liable to be cut up. Roads carefully constructed, on plans nearly similar, have not suffered in this particular.

32. Quality of road. This will be a smooth and uncommonly level road. The southern section passes through a tolerably level country; the northern section is more hilly; but great care has been taken to wind or avoid the hills where they ascend.

33. Foundation of road. Generally hard ground.

34. Prominent advantages. As I wish to avoid saying any thing with respect to our neighboring roads, and as I should be obliged to remark on some of them leading out of the state if I made answer to this query, I will merely state, that our road affords the shortest and most level communication between the city of Philadelphia and the state of New York, at the Great Bend; and that, by passing the Moosic and Lackawannock mountain, by two important gaps, it lays open a country that no other road, on any other line, can ever be projected so effectually and securely to reach.

35. Principal market. Newburg, on the North River, and Wilkesbarre, Luzerne county.

36. Benefits resulting. This can be no further answered than by stating that from appearances it will give a considerable increase in population and improvement.

37. Where place of business, and who president. At the house of Jeremiah Clark, in Abington township, Luzerne county. The president is Henry W. Drinker, of Covington township, Luzerne county.

38 & 39. Should broad wheels go free, &c. Not as yet able to answer.

40 & 41. Form of road—Height of centre, &c. Six inches in twenty feet width, if made of stone or other solid materials.

42. Proper depth for materials. By *my own* observation on the Easton and Wilkesbarre road, I am persuaded that 5 or 6 inches of solid material on the surface, well compacted together, will protect a road from being cut through by loaded wagons, with common wheels, say 5 horse teams, carrying from 2 to 2½ tons weight; provided the ditches are so constructed as to drain off the water and not to expose the bed of the road to injury from the frost in the spring of the year. Having ditches so constructed as to retain the water and soak into the bed of the road, appears to me to be generally very injurious; and that the greatest care should be taken to lead this water off by every fit opportunity.

43. Greatest safe load. Not able to answer, further than as above.

44. Best size or weight of stone. If well covered, it is believed that stones that will pass through a ring of 2½ inches diameter, will make as solid a road as though they were broken smaller.

45. Were materials near or distant. They will generally be near at hand.

46. Wages of turnpike labourers. In this section of country, the best labourers generally took small portions of roads or some parts thereof, as grubbing, &c. by the job. If by the day, I believe the general average last year was sixty two and one half cents, and found.

47. Causes of the present cheapness of road making. The want of and scarcity of money in the country, in part, and improvements in the application of labor. In regard to the value of money, I am induced to believe some remarks may not be deemed impertinent, as I conceive that money has a peculiar value at this time in the northern section of Pennsylvania. Much of this portion of the state has been newly settled. The settlers were mostly, industrious, but generally poor. In this situation they purchased new lands, or parts of the forrest, on which they obtained generally liberal credits. This enabled them to devote their time and strength to the clearing and improvement of their lands. The times were good, and like others, they had made their calculations accordingly—seeing, in prospect, a time when they should be able to pay for their lands and be completely independent. The times altered, and the periods of making payment for their farms advanced fast upon them. This has been the case for three years back, and is the case now. With many, there has been an absolute necessity of raising some money, or a certainty of loosing their farms, the fruit of many years of labour and privations. This state of things, I say, has given a peculiar value to cash in this section of the state.

48, Improvements in road making. Easier methods of grubbing up the trees and getting rid of the timber than were in use formerly: so also in ploughing and scraping, forming ditches, &c. a better knowledge of the various earths and stones, and how to take hold of the various parts of the work to advantage—less losses by sudden rains destroying the work whilst in a half finished state—in fine, a better economy, with the aid of a prudent foresight, founded on former experience.

Phillipsburg and Susquehanna Turnpike Road Company.

1. Extent. Eighteen miles and 140 perches.
2. Commences, at Philipsburg, Centre county.
3. Terminates, at Anderson's creek, Clearfield county.
4. Passes, through no towns—over the Moshannon and Clearfield creeks, and west branch of Susquehanna. Near the Clearfield creek, it passes several very considerable hills, not particularly named.
5. Begun, in the year 1820, about the first May.
6. Completed, in the year 1821, about the 7th August.
7. Proportion completed. The whole completed, with the exception of the bridge over the Susquehanna, which is in process of being built at the joint expense of all the companies between Mead-

ville and Northumberland. In subsequent replies as to expenses, be it understood, that the proportion of this company to the construction of that bridge, is \$480, which will be included in the averages.

10. Capital stock. 22,500 dollars.

11. Price and number of shares. Fifty dollars per share.

12. Private subscriptions. 6,500 dollars.

13. State subscription. 16,000 dollars.

14. Cost, including bridges, 1,945 dollars per mile.

17. Materials. Of various materials, according to the nature of the ground over which it passes. Wood, over wet places; gravel on sides of hills; stone, where it abounds, and clay.

18. Size of stones. To pass through a ring three inches in diameter.

19. Width. On the sides of hills, twenty-two feet, on level ground, thirty feet.

21. Shape of road. On the sides of hills, the road inclines to the hill, at the rate of one inch to a foot, with sewers under the road every fifty yards. On level ground, convex; the centre of the road higher than the sides about twenty inches.

22. Rate of tolls. A loaded wagon with broad wheels, if exceeding seven inches, toll free; ditto, with narrow wheels, 3 1-3 cents per mile; a pleasure carriage with four wheels and two horses, 2 1/2 cents per mile—with four horses, 4 cents; a single man and horse, for five miles, three cents.

23. Distance of gates apart. One gate only, for whole distance.

24. Number of managers. One president and twelve managers. No inconvenience felt from the number.

25. Average tolls since erection of gates. The gate has only been erected about six months. The receipts for the first month, were \$37; but this will probably far exceed the average of the year, from the unusual number of sleds which have passed.

29. Debts. About 2,500 dollars. No other debts of any importance.

30. Market price of stock. No sale.

31. Road liable to be cut up. The short experience we have had, will scarcely justify a conclusive answer to this question. Hitherto the road has admirably answered, even exceeded, all expectations. Excepting in one short space, which will be repaired with wood, it has not been cut up at all.

32. Quality of road. A smooth road. The country about half level and half hilly.

33. Foundation of road. In the hilly country usually hard; on the lowlands and beaver dams, soft.

34. Prominent advantages. It has opened to us resources which have surprised the warmest friends of the measure. Produced traffic and exchange of commodities with our neighbors in the westward, mutually advantageous and of utility to the state at large and to extent unlooked for. It also promotes, very essentially, the settlement of the land.

35. Principal market. The iron and other works at Philipsburg, and the supply of new settlers, at present constitute a market for all the produce.

36. Benefits resulting. A very decided increase of population and improvement in the vicinity of the road, since its commencement. The improvements of the last year, exceed those of any four previous years.

37. Where place of business, and who president. At Philipsburg. The present president is Hardman Philips, who resides at Philipsburg.

38. Should broad wheels go free. Yes: and in conformity with this opinion we have passed a bye-law, exempting them from toll.

40. Best form of road. We consider a slight inclination from one side to the other of the road, as the most durable. Where this cannot be done to advantage, as little convexity as is essential for purposes of draining.

42. Proper depth for materials. This depends on the quality of the stone or other material used. If broken pebbles or flint stone be used, none of the pieces exceeding six ounces in weight, ten or twelve inches in thickness will suffice. Other materials in proportion to their hardness.

43. Greatest safe load. Not sufficiently experienced; but, we believe, four tons on broad wheels, and two tons on narrow wheels.

44. Best size or weight of stones. Six ounces.

45. Were materials near or distant. Near at hand.

46. Wages of turnpike laborers. Our contractors usually paid their hands nine dollars per month, finding them provisions.

47. Causes of the present cheapness of road making. Owing, in part, to the fall in the price of labor and materials, and also in part, to improvements in the skill and economy of applying them.

48. Improvements in road making. Consist in the use of such materials as are most convenient to the road, which saves the necessity of hauling stone, sometimes at an enormous expense.

Pittsburg and Butler Turnpike Road Company.

1. **Extent.** Thirty miles, being one section of a turnpike road from Pittsburg to Erie.
2. **Commences,** at Pittsburg, Allegheny county.
3. **Terminates,** at Butler, in Butler county.
4. **Passes.** It is connected with Pittsburg by the bridge over the Allegheny river; crosses Pine creek five miles from Pittsburg, and Connequenessing creek, at the town of Butler.
5. **Begun,** in 1820.
7. **Proportion completed.** About twenty miles.
8. **When completion expected.** In 1822.
9. **Unfinished spaces.** There are points in both counties unfinished, of little extent.
10. **Capital stock.** 10,000 dollars.
11. **Price and number of shares.** 25 dollars each.
12. **Private subscriptions.** 460 shares.
13. **State subscription.** 19,000 dollars.
14. **Cost.** 1,020 dollars per mile, including the bridges.
15. **Contracts made.** Contracts are made for the whole, at about the above rate.
17. **Materials.** Those furnished by *the bed of the road*. It is called a *clay turnpike*. The ground and materials well suit this kind of road.
19. **Width.** The whole road is fifty feet wide: twenty-five of it thrown up and made artificial.
20. **Depth of materials.** It is convex: two feet higher at the crown than at the sides, and ditched at each side.
21. **Shape of road.** Convex; two feet besides the ditches.
22. **Rate of tolls.** As no part is yet licensed, the rates are not precisely fixed. By the law they may be so raised, as to yield six per cent.
23. **Distance of gates apart.** None erected.
24. **Number of managers.** One president and twelve managers. Probably not too great; at all events, not while they are making the road.
25. **Average tolls since erection of gates.** No gates yet up, and of course no toll.
29. **Debts.** It may be said we are not yet in debt. The times fixed by the contracts for the whole of the payments not yet arrived.

30. Market price of stock. No sales.

31. Road liable to be cut up. Most liable in the spring and fall.

32. Quality of road. Being of clay, it will be smooth. The country *undulating*—no mountains.

33. Foundation of road. I have already said it is a dry, *slaty* or *gravelly* foundation, well suited to the kind of road adopted.

34. Prominent advantages. First, the common advantages arising from good roads. Second, it facilitates coming to Pittsburg, the common market for the west. Third, it connects by a turnpike the important points, *Pittsburg* and *Erie*. Fourth, it is one link in the chain, on the southern route, from Philadelphia to Erie. Fifth, it opens, and invites emigration to a part of Pennsylvania, wanting population and improvement.

35. Principal market. Pittsburg, by the routes of this and other turnpikes, and the rivers.

36. Benefits resulting. A sensible increase of population and improvement in the vicinity of the road, since its commencement.

37. Where place of business, and who president. At Pittsburg and Butler. William Wilkins is the president, and resides at Pittsburg.

38. Should broad wheels go free. The advantages from their use are very great; they should be encouraged, and wheels of a certain width should be exempted from toll.

39. If not, what exemption. A much greater difference should be made than the law now makes.

40. Best form of road. Convex.

41. Greater height of centre above the sides. At least two feet in a width of twenty.

42. Proper depth for materials. This depends entirely upon the kind of materials. *Limestone* is the best. *Narrow* wheels will cut through almost any depth. Its protection will be secured by wear and continual repairs, until it becomes hard and compact. In the first instance it would be exceedingly expensive to make a *stone* road deep enough to resist the effect of narrow wheels.

43. Greatest safe load. We have yet had no experience. The wagoning will generally be light. A wagon, we trust, will make no impression, when the weather is good.

44. Best size or weight of stones. The smaller the better. At all events they should pass through a ring of three inches.

45. Were materials near or distant. It is composed of the materials in the bed of the road.

46. Wages of turnpike laborers. In 1820, 62½ and 75 cents per day, finding himself. Now forty cents, and find him: fifty cents and he find himself.

47. Causes of the present cheapness of road making. Chiefly owing to the fall in the price of labor and provisions and something to the experience, knowledge and skill in making this kind of road.

48. Improvements in road making. I do not know that there is any improvement in the manner of making these roads particularly. They have become more familiar to us. It is no longer a new business, and people are not afraid to make contracts. The only tools used are, the axe, grubbing-hoe, shovel, plough and scoop.

Pittsburg and New Alexandria Turnpike Road Company.

1. Extent. (Not answered).
2. Commences, opposite New Alexandria, in Westmoreland county.
3. Terminates, at the Greensburg and Pittsburg turnpike road, east of the city of Pittsburg.
4. Passes, through Murrys ville, Newlinsburg and New Salem.
5. Begun, in the year 1819.
6. Completed, in the year 1821.
11. Price and number of shares. Original price fifty dollars.
17. Materials. Stone broken fine, and gravel laid on the top.
18. Size of stones. To pass through a three inch ring.
19. Width. Twenty-two feet of stone; the side roads made of clay and covered with gravel: in all forty feet.
20. Depth of materials. Fifteen inches in the centre, and 13 inches at the sides.
21. Shape of road. Convex; three inches higher in the centre than at the sides.
22. Rate of tolls. Tolls are collected agreeably to the act of assembly.
23. Distance of gates apart. Ten miles.
24. Number of managers. Twelve: but it is generally thought that six would be sufficient.
31. Road liable to be cut up. Our road being new, of course is more liable to be cut up than it will be after the materials become consolidated. Most liable to injury in the months of November, December, March and April.

32. **Quality of road.** It is tolerably smooth, the country through which it passes is rather hilly; but the course of the road being nearly the same as our creeks, enabled us to lay it out on ground that is tolerably level.

33. **Foundation of road.** The ground is generally hard. There is none that can be called *soft*.

34. **Prominent advantages.** The road affords a quick, safe and convenient transportation for salt, iron, &c. to Pittsburg and other places. It enables the manufacturers of those articles to procure provisions and other necessities for carrying on their work, at a reduced price. The saving on the carriage alone of these articles, is estimated at one-fourth. Our road is also an important link in the chain of internal communication between Pittsburg and Philadelphia, and therefore highly conducive to the interests of those places.

35. **Principal market.** Pittsburg and Philadelphia. The iron-works also engross, a part, all of which passes along the route of which this road forms a part.

36. **Benefits resulting.** Notwithstanding the uncommon pressure of the times, the neighborhood in the vicinity of our road has increased at least one-fourth, and the improvements about one-third.

37. **Where place of business, and who president.** At Murraysville: and the Rev. James Graham, the president, resides in Allegheny county.

38. **Should broad wheels go free.** We do consider that wheels of nine inches in width, and to roll fifteen inches, carrying not more than three tons, would be of such benefit to the road as to entitle them to go free.

43. **Greatest safe load.** Broad wheels, say about three tons: narrow wheels, about half that weight.

44. **Best size or weight of stones.** To pass through a three inch ring, or thereabouts.

45. **Were materials near or distant.** Generally convenient. None of the stone was brought more than one-fourth of a mile.

46. **Wages of turnpike laborers.** For a good hand, from 75 to 87½ cents per day, he finding himself.

47. **Causes of the present cheapness of road making.** Partly owing to the cheapness of labor, but principally to improved skill in making, and economy in the management of the same.

48. **Improvements in road making.** In making the bed of the road, and side road previously to stoning, and employing carts in hauling stone in place of wagons. The selling out the making in small contracts, so that the laborers may principally be the contractors, and in this way preventing speculations and impositions, have, in our opinion, been the chief causes of the reduction in the price of road making.

Pittsburg and Steubenville Turnpike Road Company.

1. Extent. Twenty-eight miles.
2. Commences, opposite Pittsburg, on the Monongahela, in Allegheny county.
3. Terminates, at the western boundary of the state, in Washington county, on the direct road to Steubenville.
4. Passes, over Sawmill run, at its junction with the Ohio, and over Chartier's creek. Both of these creeks are bridged; that over the latter rests on two abutments and one pier, is elevated above high water mark, and cost \$3,500. It also passes over raccoon creek, and sundry hills.
5. Begun, in the year 1818.
6. Completed. Not yet completed.
7. Proportion completed. Five miles.
8. When completion expected. Not known.
9. Unfinished spaces. The west end of the route.
10. Capital stock. 125,000 dollars.
11. Price and number of shares. Fifty dollars per share; 1,641 shares.
12. Private subscriptions. 30,000 dollars.
13. State subscription. 12,000 dollars—3,043 dollars have been paid.
14. Cost. 5,150 dollars per mile, including Chartier's creek bridge.
15. Contracts made. None.
16. Contracts could be made, at about two thousand dollars per mile, and probably less, as much the worst part of the road is made.
17. Materials. Stone.
18. Size of stone. To pass through a two and a half inch ring.
19. Width. Twenty-two feet.
20. Depth of materials. Fifteen inches in the centre and twelve inches at the sides.
21. Shape of road. Convex; six inches higher in the centre than at the sides, the bed of the road being curved before laying on materials.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, eight cents for five miles; ditto, with narrow wheels and four horses, sixteen cents for five miles; a pleasure carriage with two horses, twelve cents for five miles; a single man and horse three cents for five miles.

23. Distance of gates apart. But one erected.

24. Number of managers. One president and eight managers; but we think a president and six managers would be sufficient, if selected with judgment.

25. Average tolls since erection of gates. As we only obtained license to take toll in May last, we can only answer as to the average tolls per month. The amount has been from ninety to one hundred dollars. No dividend has yet been declared; but we expect to make a dividend in the present month. This will answer the three following questions.

29. Debts. Six hundred dollars, but the stock not near all called in.

30. Market price of stock. No sales.

31. Road liable to be cut up. No. It has been represented by travellers from New York and Philadelphia, to be equal to the best turnpike roads in the country.

32. Quality of road. Smooth; but the hills over which it passes are of considerable magnitude.

33. Foundation of road. Hard.

Prominent advantages. The neighborhood derives a particular advantage in carrying their produce to market, as Chartier's hills, and the Ohio hills near Pittsburg, generally formed an angle of from eight to ten degrees from a horizontal line; and these hills occupied the whole extent of the road we have finished. And the advantage to the state, in our opinion, would be great, was the road completed and made free, as well as the road from Philadelphia to Pittsburg, or just so much toll collected as would keep them in repair. We believe that this route might again command its wonted share of the advantages arising from the intercourse between the east and the west. The time was when our road, united with the Harrisburg and Pittsburg turnpike, was the route almost exclusively used for travelling and transportation to the western country. Pittsburg was then the great emporium of the west, and would have remained so, had it not been for the construction of the national road, which passes through the south-west corner of the state, and accommodates a small portion of her citizens: while the loss to the centre of the state in trade and travel, is immense.

35. Principal market. Pittsburg, and thence by the turnpike to the eastward: also, down the Ohio river to the New-Orleans market.

36. Benefits resulting. No perceptible increase of population and improvement, in consequence of the formation of this road.

37. Where place of business, and who president. At different places on said road. President, Robert Witherow, residing near Briceland's roads, Washington county, Pennsylvania.

38. Should broad wheels go free. As no wagons of this description have travelled our road, we are unable to answer this and the following question, satisfactorily.

40. Best form of a road Convex.

41. Greater height of centre above the sides. Six inches.

42. Proper depth for materials. Fifteen inches, if on a hard foundation: this is the opinion of the board; but my present opinion is eighteen inches.

43. Greatest safe load. On narrow wheels, forty cwt. and as much as can be drawn by six horses on broad wheels.

44. Best size or weight of stones. Those on the top should pass through a $2\frac{1}{2}$ inch ring, but those in the bottom might be somewhat larger.

45. Were materials near or distant. Generally near at hand.

46. Wages of turnpike laborers. From ten to twenty dollars per month.

47. Causes of the present cheapness of road making. The fall in the price of produce.

48. Improvement in road making. There has no skill or economy been employed in the construction of our road; but all has been done by Irishmen and the pure dint of hard labour. There has some eastern men passed through our country, who say they would engage to throw up a clay road thirty feet wide, for 12 $\frac{1}{2}$ cents per perch. Where no grubbing was to be done, they would employ two yoke of oxen, a plough and shovel or scraper, and work them with three men.

Ridge Turnpike Road Company.

1. Extent. Twenty-three miles and a half.

2. Commences, in the city of Philadelphia.

3. Terminates, at Perkiomen bridge, in Montgomery county.

4. Passes, through Norristown; over the Wissahiccon and Skippack creeks. There are two principal hills: Robeson's, near Wissahiccon creek, and Barren hill; also the hill from French creek, near Norristown.

5. Begun, in 1812.

6. Completed, in 1816.

10. Capital stock. Seventy-five thousand dollars, with liberty to increase it.

11. Price and number of shares. Fifteen hundred shares, each 50 dollars.

12. Private subscriptions. About 1800 shares.

13. State subscription. The state subscribed nothing, until the improvement bill of last year, when 2,500 dollars were subscribed, from which the company, as yet, has received no benefit.

14. Cost. The whole cost, including bridges, &c. was 175,707 dollars; average about 7,500 dollars per mile.

17. Materials. Stone, occasionally covered with gravel.

18. Size of stones. According to contract, they were to pass through a $4\frac{1}{2}$ inch ring, but this was seldom attended to.

19. Width. Twenty-four feet.

20. Depth of materials. From 12 to 18 inches.

21. Shape of road. The road was made convex; use and time have in many parts reduced the convexity, and the elevation of the centre above the sides varies so much, in different parts, that no precise answer can be given to this part of the question.

22. Rate of toll. A wagon with broad wheels and four horses, pays 2 cents per mile; narrow wheels, 3 cents 4 mills per mile; a pleasure carriage with two horses, 3 cents per mile; a man and horse, 1 cent.

23. Distance of gates apart. About $4\frac{1}{2}$ miles.

24. Number of managers. Twelve managers: not thought too many.

25. Average tolls since erection of gates. 11,066 dollars per annum.

26. Average tolls for three years. 10,905 dollars per annum.

27, 28. Annual dividend, &c. The company has never been able to make any dividends.

29. Debts. About 140,000 dollars.

30. Market price of stock. Nothing.

31. Road liable to be cut up. The road is much injured by wagons, in winter and spring.

32. Quality of road. Tolerably smooth, and generally level.

33. Foundation of road. Generally hard.

34. Prominent advantages. Transportation of produce, marble and lime, to Philadelphia; returns (though not in equal proportion) of merchandize; line of communication through Reading to Northumberland.

35. Principal market. Philadelphia. Germantown turnpike, and several by-roads, divide the passage with the Ridge road.

36. Benefits resulting. None perceptible.

37. Where place of business, and who president. At Philadelphia, where the president William Rawie, and the treasurer, Thomas H. White, reside.

38. Should broad wheels go free. No.

39. If not, what exemption. About one half.

40, 41. Best form of a road, &c. A moderate convexity is believed to be the most durable.

42. Proper depth of materials. Not less than 18 inches.

43, 44. Greatest safe load—Best size or weight of stones. Cannot say. Opinions different.

45. Were materials near or distant. In some part near at hand; but in no recollected case above two miles distant.

46. Wages of turnpike laborers. In 1812, laborers generally received one dollar per diem. They may be had for less at present, generally 75 cents.

47, 48. Causes of the present cheapness of road making, &c. The general scarcity and subsequent higher value of money, seems to be (with us) the cause. But not having made road since 1816, we are scarcely competent to answer these two questions.

Ridley Turnpike Road Company.

SIR: I am instructed to reply, that the laws respecting the Ridley turnpike, have run out, and the project abandoned by the stockholders.

Respectfully yours,

THOMAS ROBINSON.

CONDY RAGUET, Esquire.

Robbstown and Mount Pleasant Turnpike Road Company.

1. Extent. Twenty-one miles.

2. Commences, on the bank of the Monongahela, opposite Williamsport, Allegheny county.

3. Terminates, at Mount Pleasant, Westmoreland county.

4. Passes, through Robbstown, and across the Youghiogheny river. Generally hills, from point to point.

5. Begun, in 1819.

6. Completed. Not yet completed.

7. Proportion completed: Five miles completed, and ten miles sold, which we expect will be finished in the course of the ensuing summer.

8. When completion expected. If we had money enough, it should be done in the course of 18 months.

9. Unfinished spaces. There is 3 miles at each end of the section, yet to be sold out.

10. Capital stock. Eight hundred shares, of 50 dollars each—40,000 dollars.

12. Private subscriptions. 45,800 dollars, of which a large amount is insolvent, say 5000 dollars. About 20,000 dollars paid in.

13. State subscription. Ten thousand dollars: one third paid.

14. Cost, per mile, \$4,597 75.

15. Contracts made. At \$1,945 60 per mile.

16. Contracts could be made. At about 2000 dollars per mile.

17 Materials. Stone and gravel, part limestone.

18. Size of stones. The first stratum to pass through a six inch ring, and the upper stratum to pass through a 3 inch ring.

19. Width. Twenty-one feet.

20. Depth of materials. Of limestone 12 inches centre, and 9 inches at the side: freestone, 15 inches centre and 12 inches side.

21. Shape of road. See above.

22. Rate of tolls. Agreeably to the act passed 19th March, 1816.

23. Distance of gates apart. One gate on 5 miles.

24. Number of managers. Twelve managers. The number is too great. One half of the present number would be sufficient.

28. Annual dividend for three years: Nothing—the toll has been applied to repairing the road.

29. Debts. About 600 dollars.

31. Road liable to be cut up. It is most liable to be cut up in the spring of the year.

32. Quality of road. Smooth road, and generally hilly.

33. Foundation of road. Generally very firm, passing over a high and airy country.

34. **Prominent advantages.** As the road passes through a rich and fertile section of the country, it would enable us to carry our produce, which is abundant, more readily to the Philadelphia market. The national road has drawn a considerable part of our trade more to the south, and, in consequence, Wheeling has become a considerable place of deposit: but this road would be the means of drawing the trade to Philadelphia.

35. **Principal market.** The eastern part of the state, and passes through Bedford, Chambersburg, Harrisburg, Lancaster, &c.

36. **Benefits resulting.** The increase in population and improvement has been considerable. There are in the vicinity of the road nineteen grist and merchant mills.

37. **Where place of business, and who president.** At Robbstown. The president, Mr. John Nichols, resides in Robbstown.

38. **Should broad wheels go free.** We are not able to give you a direct answer, the road not being finished; but think they should not be altogether free.

39. **If not, what exemption.** At least one half or more.

40. **Best form of a road.** Of course convex, as the travelling is mostly on the centre of the road.

41. **Greater height of centre above the sides.** See answer to question No. 20.

42. **Proper depth of materials.** We consider fifteen inches free-stone, a proper depth; and twelve inches limestone, equally good.

43. **Greatest safe load.** Three tons on broad wheels.

44. **Best size or weight of stones.** See answer to question No. 18.

45. **Were materials near or distant.** Generally near at hand.

46. **Wages of turnpike laborers.** At the commencement, about one dollar; last summer, fifty cents, and lower.

47. **Causes of the present cheapness of road making.** Chiefly occasioned by the fall of produce and materials.

48. **Improvements in road making.** Principally in the manner of making the contracts, as we have latterly sold them out by public outcry.

Somerset and Bedford Turnpike Road Company.

1. **Extent.** Thirty-three miles.
2. **Commences,** at Somerset, in Somerset county.
3. **Terminates,** four miles west of Bedford, in Bedford county.
4. **Passes,** over the Raystown branch of Juniata, the Dry ridge and the Allegheny mountain.

5. Begun, in the year 1818.
6. Completed. Not yet completed.
7. Proportion completed. 15 miles are completed.
8. When completion expected. It could be finished during the present year, if the funds of the company were sufficient.
9. Unfinished spaces. 6 miles east of Somerset, and 11 miles on the Dry ridge.
10. Capital stock. 75,000 dollars.
11. Price and number of shares. 1500 shares, at 50 dollars per share.
12. Private subscriptions. 40,000 dollars.
13. State subscription. 12,500 dollars.
14. Cost. 3,000 dollars per mile, including bridges, managers' pay, &c.
15. Contracts made. At 2,000 dollars per mile.
16. Contracts could be made. At sixteen hundred dollars per mile.
17. Materials. Stone and gravel.
18. Size of stones. The contractors were obligated to make the stone pass through a three inch ring, but in some instances there was a small deviation from that rule.
19. Width. Twenty-two feet of stone, and eight feet of a summer road, made of clay or gravel.
20. Depth of materials. Twelve inches of stone and three inches of gravel, the whole breadth of the road.
21. Shape of road. Convex; four inches higher in the centre than at the sides.
22. Rates of toll. A loaded wagon with broad wheels and four horses, 12 cents per five miles; ditto, with narrow wheels, 24 cents for five miles; a pleasure carriage and two horses, 12½ cents for ditto; a single man and horse, 3 cents for ditto.
23. Distance of gates apart. There are but two gates, erected at a distance of sixteen miles from each other. A part of the intermediate space not yet completed.
24. Number of managers. Twelve; we consider the number greater than necessary.
25. Average tolls, since erection of gates. 481 dollars.
26. Average tolls, for thee years, There being but one gate erected, 481 dollars each year for two years.

27. Annual dividend since road commenced. One and one half per cent.

28. Annual dividend for three years. Averaging $1\frac{1}{2}$ per cent.

29. Debts. 6,238 dollars.

30. Market price of stock. None offered for sale.

31. Road liable to be cut up. It is not liable to be cut up at any season of the year, more than what is common for the settling of the stones in all new roads.

32. Quality of road. It is generally smooth: about 11 miles passes through a level country, the balance hilly.

33. Foundation of road. It is generally very hard and firm.

34. Prominent advantages. Our road, since the completion of the Cumberland road, has been of but little advantage to the neighborhood, owing to its not being turnpiked. We consider the advantages to be derived from it, very great. The road itself will create a market for the greater part of the surplus produce of the farmer. It will be the means of drawing the travelling from the western states into Pennsylvania, which at present passes by the national road into Maryland.

35. Principal market. The principal part of the trade at present goes by the way of Cumberland to Baltimore; but that would not be the case, were the Pennsylvania turnpikes completed and free of toll.

36. Benefits resulting. The time has been too short, to produce any sensible difference.

37. Where place of business, and who president. At Henry Imhoff's, at the foot of the Allegheny mountain. Tobias Musser, president, resides in Somerset county.

38. Should broad wheels go free. Not entirely.

39. If not what exemption. About one half, the same as is contemplated by the act of incorporation.

40. Best form of a road. We consider a convex road the best.

41. Greater height of centre above the sides. About six inches.

42. Proper depth for materials. Twelve inches of stone will make a solid firm road, where the foundation is firm, and deeper in proportion to the softness of the foundation.

43. Greatest safe load. About 60 cwt.

44. Best size or weight of stones. To pass through a ring of three inches.

45. Were materials near or distant. At an average distance of 160 perches.

46. Wages of turnpike laborers. At the commencement, \$1 12½ per day; and during the last year 62½ cents.

47. Causes of the present cheapness of road making. Occasioned in part by the cheapness of produce, and in part by improvement in the art of applying labor; but the principal reason is in the plan pursued by the managers in making contracts.

48. Improvements in road making. The contracts are given to the lowest bidder, by public outcry, and not more than 80 perches were given to one man. By that means it was in the power of every laborer to become a contractor.

Somerset and Mount Pleasant Turnpike Road Company.

1. Extent. Twenty-eight miles, 275 perches.
2. Commences, at Somerset town, Somerset county.
3. Terminates, at Mount Pleasant, Westmoreland county.
4. Passes, over Laurel Hill creek, Indiana creek, and Jacob's creek; and over Laurel Hill, and Chesnut Ridge.
5. Begun, in the year 1817.
6. Completed. Not yet completed.
7. Proportion completed. Seventeen miles.
8. When completion expected. If we had sufficient funds, it would be finished next summer.
9. Unfinished spaces. There are three miles unfinished at the east end, and eight miles at the west end. The making all contracted for, except about three miles at the west end.
10. Capital stock—price and number of shares. 800 shares required by law: 1,061 shares subscribed, at fifty dollars per share.
12. Private subscriptions. \$5,771 paid, leaving a balance of 17,279 yet to pay.
13. State subscription. 12,500 dollars—one-third paid.
14. Cost. Seventeen miles, finished, cost \$60,678 40, including expenses of the board.
15. Contracts made. Eight miles contracted for, at total cost 25,920 dollars.
16. Contracts could be made. Two miles 275 perches, probable expense, 10,000 dollars.
17. Materials. Of stone, broken so as to pass through a three inch ring.

19. Width. Twenty feet in the mountains, and twenty-one feet in the valleys.

20. Depth of materials. Fourteen inches in the centre, and twelve inches at the sides.

22, 23, 24, 25, 26, 27. Rate of tolls, &c. &c. There is but one gate erected, and that very lately.

31. Road liable to be cut up. The road is not likely to be cut up at present by wagons, they being diverted by the national free road: and from the solid materials and construction of the road, it is not subject to be cut up, no matter what the travel might be.

32. Quality of road. See answer to question No. 4. In the whole distance there is not more than five miles that bears five degrees elevation or depression.

33. Foundation of road. Generally hard.

34. Prominent advantages. The country through which the road passes, is generally fertile, well cultivated, and yielding considerable produce for the eastern market. And, when put in competition with the national road, we consider it well calculated to promote the general interest of the state, as it is leading directly from Wheeling to Philadelphia.

35. Principal market. The principal part of our produce and stock is carried to the eastern market; but latterly it is inclining to the south by the national free road.

36. Benefits resulting. Considerable improvements have been made on the road since its commencement, considering the difficulties of the times since that period. There are twelve merchant and grist mills on and within two miles of the road.

37. Where place of business, and who president. The business of the company is generally transacted at Jones's mill. The present president is John Lobingier, Esq. residing near Mount Pleasant.

38, 39. The road not being finished, we are not in possession of information to give a direct answer to these questions.

40. Best form of a road. We consider a convex road the most durable. But there is a diversity of opinion on this subject.

42. Proper depth for materials. From fourteen to eighteen inches in the centre, is esteemed a sufficient depth of stone.

43. Greatest safe load. See answer to questions No. 38 and 39.

44. Best size or weight of stones. We are of opinion that two pounds weight in the bottom, and finer to the surface, is the best.

45. Were materials near or distant. The materials are generally convenient.

46. Wages of turnpike laborers. About one dollar per day when the road was commenced. For the last year, only fifty cents.

47. Causes of the present cheapness of road making. The fall of wages and materials.

Springhouse, Northampton and Bethlehem Turnpike Road Company.

1. Extent. Estimated to be forty-two miles.
2. Commences, at the Springhouse tavern, in Montgomery county, and there intersects the Chesnut Hill and Springhouse turnpike road.
3. Terminates, at Bethlehem town, in Northampton county, with a convenient section to lead to Northampton town, in Lehigh county.
4. Passes, through Montgomery Square, Lexington cross roads, Quakertown, Frey's, &c. over two branches of the Neshamony, a branch of Perkiomen, as well as some others of considerable size; also, over the river Lehigh and Saucon creek.
5. Begun, in the year 1814.
6. Completed. Five miles were completed in the year 1815.
7. Proportion completed. Five miles.
8. When completion expected. We are unable to say, as the want of funds prevents the work progressing.
9. Unfinished spaces. No work done on any other section of the road beside the five miles completed, which intersects the Chesnut Hill and Springhouse turnpike road.
10. Capital stock. 150,000 dollars.
11. Price and number of shares. 3,000 shares, at fifty dollars per share.
12. Private subscriptions. 420 shares—19,440 dollars paid in by individuals; the balance lost, through the insolvency of subscribers to stock.
13. State subscription. 10,000 dollars, to be paid in proportion to the whole distance; 1,250 dollars of which have been drawn from the state treasury.
14. Cost. The average cost per mile, including bridges and all incidental expenses, 7,000 dollars. Several bridges of considerable size, built of stone and arched.
15. Contracts made. None have been made.
16. Contracts could be made, it is supposed, at four thousand dollars per mile.
17. Materials. Entirely of stone of a hard quality.

18. Size of stones. Contracts made for the largest size to pass through a ring of two and a half inches.

19. Width. Twenty-one feet, and a summer road on each side.

20. Depth of materials. Twelve inches in depth the whole width.

21. Shape of road. Convex, and eight inches higher in the middle than at the sides.

22. Rate of tolls. A loaded wagon with broad wheels and four horses, if the wheels are ten inches wide and roll fifteen inches, four cents for five miles; ditto, with narrow wheels and four horses, twenty cents for five miles; a pleasure carriage with two horses and four wheels, twenty cents for five miles; with two wheels, fifteen cents; a single man and horse, five cents for five miles.

23. Distance of gates apart. Four miles.

24. Number of managers. A president and twelve managers, and we consider the number not too great; they having performed the duties assigned them, without compensation.

25. Average tolls since erection of gates. 1,316 dollars.

26. Average tolls for three years. 915 dollars.

27. Annual dividend, since road commenced. No dividends declared, the toll being applied to the payment of toll gatherers' wages, repairs, and interest on money borrowed.

28. Annual dividend for three years. During this period tolls received have not been sufficient for the purposes mentioned in the last answer.

29. Debts. About 15,000 dollars.

30. Market price of stock. No sales.

31. Road liable to be cut up. Part of it is liable to be much cut up by wagons, especially that immediately above the section which is completed, and particularly in the spring of the year, when it is at times almost impassable.

32. Quality of road. Some sections of it are smooth and others rough; not generally hilly, except two hills of considerable size, commonly called Landis's Hill and Lehigh.

33. Foundation of road. In some parts hard, and in others quite soft.

34. Prominent advantages. The enabling the people in the neighborhood to transport with facility their produce to market, particularly the farmers, millers, and distillers of the counties of Lehigh, Northampton, Wayne, Luzerne, and Susquehanna, and others as far back as the lake country, who load their wagons heavily. This is the nearest and most convenient route from Philadel-

phia to the falls of Niagara, and we think must be the principal northern route. The mail stage now passes this route from the first to the last mentioned place, constantly, and performs it in five days.

35. Principal market. Philadelphia; and would generally be transported by this route, if completed.

36. Benefits resulting. Some increase of population, and considerable improvements in the vicinity of the section which is completed.

37. Where place of business, and who president. Generally at the public house of John Snare, 7 miles above the commencement of the road, President, Isaac Morris, who resides at Lexington cross roads, where this road crosses the county line road dividing Bucks and Montgomery.

38. Should broad wheels go free. Our road not being completed, our experience of their advantage is too limited to say with certainty, but we think not entirely so.

39. If not what exemption. About one-fourth for broad wheels and three-fourths for narrow wheels.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. From six to nine inches, and should prefer the latter.

42. Proper depth for materials. Not less than twelve inches.

43. Greatest safe load. On broad wheels, from three to four tons; and on narrow wheels, from two to three. But this depends much upon the wetness of the road.

44. Best size or weight of stones. It is believed from experience, that over flat ground, large stones placed on their edge in close order, with a layer of fine broken stone over the top, would make the most durable and smoothest road.

45. Were materials near or distant. Generally near at hand, taken out of the ground.

46. Wages of turnpike laborers. One dollar per day, and during the last year none employed.

47. Causes of the present cheapness of road making. Occasioned mostly, with us, by the fall in the price of wages and materials: but we think great improvements might be made in the application of machinery.

Stoystown and Greensburg Turnpike Road Company.

1. Extent. Thirty-seven miles.

2. Commences at Stoystown, in Somerset county.

3. Terminates, at Greensburg, in Westmoreland county.
4. Passes, through Laughlin's town, Ligoniertown and Youngstown. It passes over the Loyalhanna creek, the Laurel Hill and Chesnut Ridge.
5. Begun, in 1816.
6. Completed, in 1819.
10. Capital stock. Unlimited.
11. Price and number of shares. Not limited.
12. Private subscriptions. 71,000 dollars.
13. State subscription. 112,000 dollars.
14. Cost. About 6,000 dollars per mile.
16. Contracts could be made, at an average of 5,000 dollars per mile.
17. Materials. Stone.
18. Size of Stones. To pass through a four or five inch ring.
19. Width. Twenty-two feet.
20. Depth of materials. 18 inches in the centre and 10 inches at the sides.
21. Shape of road. Convex.
22. Rates of toll. The rate fixed in the law. There has been no increase.
23. Distance of gates apart. Ten miles.
24. Number of managers. One president and twelve managers. Nine would be sufficient.
25. Average tolls, since erection of gates. 3,500 dollars.
26. Average tolls for three years. 5,500 dollars.
27. Annual dividend, since road commenced. None.
28. Annual dividend, for three years. None.
29. Debts. About 32,000 dollars.
30. Market price of stock. No sales.
31. Road liable to be cut up. Yes; particularly in the spring and fall seasons.
32. Quality of road. Generally rough.
33. Foundation of road. Hard.
34. Prominent advantages. The facility it gives in transporting commodities to market; its attraction of the carrying trade, and the consequent consumption of the produce of the soil, and the aid it gives to the commerce of Philadelphia.

35. Principal market. Philadelphia. It passes through Chambersburg, Harrisburg, &c.

36. Benefits resulting. A sensible increase of population and improvement in the neighborhood of the road, since its commencement.

37. Where place of business, and who president. At Ligonier town. Richard Coulter, the president, resides in Greensburg.

38. Should broad wheels go free. No.

39. If not, what exemption. One half.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. Eight inches.

42. Proper depth for materials. With good materials and a good foundation, one foot at the sides, and twenty inches in the centre.

45. Were materials near or distant. In the mountainous district, convenient: in the flat country, from $1\frac{1}{2}$ to 2 miles.

46. Wages of turnpike laborers. One dollar per day, when commenced, and 75 cents in the last year.

47. Causes of the present cheapness of road making. Occasioned in some measure by the combined operation of the decreased price of wages and materials, and improvements in the skill and economy of applying labor and materials.

48. Improvements in road making. In the skill acquired by experience.

Strasburg and Fannetsburg Turnpike Road Company.

1. Extent. About 36 or 37 miles.

2. Commences, at the west end of Shippensburg, Franklin county.

3. Terminates, in Bedford county, on the top of Sidelinghill, where the same intersects the southern turnpike, being that part of the old state road from Shippensburg to Pittsburg.

4. Passes, through Strasburg and Fannetsburg; over Conodoguinet and West Conococheague creeks, across which there are durable stone bridges erected; no other streams of consequence on the route. It passes over the North, Kittatiny and Tuscarora mountains, and part of Sidelinghill.

5. Begun. Not yet commenced. The act authorising the incorporation of the company, passed the 21st January, 1819. On the 23d April following letters patent did issue. In the same year

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the road was surveyed and located on the mountains. In the session of 1819-20, we petitioned the legislature of Pennsylvania for aid, but none was granted.

8. When completion expected. We had, by the provisions of the act, ten years after the passage thereof to commence, and fifteen years to complete the road.

10. Capital stock. 150,000 dollars: one half of which would make the road at this time.

11. Price and number of shares. Three thousand shares, at fifty dollars each.

12. Private subscriptions. About 30,000 dollars subscribed.

13. State subscription. None.

16. Contracts could be made. It is probable contracts could be made at this time for \$2,000 per mile, on an average, including bridges.

17. Materials—would be limestone, sandstone and freestone.

18. Size of stones. To pass through a three inch ring, except for top stones, which ought to be smaller.

19. Width. Twenty feet is the width which was intended to be bedded with stones.

20. Depth of materials. On a road with so solid a foundation as ours would have, 9 inches at the sides and 15 in the centre, would be sufficient.

21. Shape of road. We believe a convex form to be the best. Perhaps 6 inches higher in the centre than at the sides, would be a good proportion.

22. Rates of toll. The act of incorporation regulates the rate of toll.

23. Distance of gates apart. The distance is fixed by law, at an average distance of 5 miles.

24. Number of managers. Twelve has been the number. Eight would be sufficient.

29. Debts. None.

30. Market price of stock. None offered for sale.

32. Quality of road. The road is tolerably level, the mountain excepted.

33. Foundation of road. It would be generally hard.

34. Prominent advantages. The prominent advantages which would be derived by our neighborhood in case we had a turnpike road, would be a good market for oats, rye, hay, and other articles of agricultural produce. As the eastern and western travel would

be on our road, which would cause a home consumption, we could send flour to Philadelphia by empty wagons returning from the west, cheaper than to Baltimore. Many more advantages could be stated; and we do further state, with interest, and do most unquestionably believe, that there is no other road in the state of Pennsylvania of the same extent, from which there are more decided advantages to be derived to the state. It is well known that this road is from 7 to 9 miles shorter from Shippensburg to the top of Sidelinghill, than the road by way of Chambersburg and Loudon, and runs in a direction calculated to draw the trade to the metropolis of our own state; whereas the present turnpike road by way of Loudon and Chambersburg, is calculated to draw the trade and thoroughfare to the metropolis of another state, (Maryland,) of which no doubt some of your committee are aware, if acquainted with the geography of this section of our country. We would further state, that in case a road be made, free from Philadelphia to Pittsburg, that, in our humble opinion, the Strasburg and Fannetsburg route ought to be taken into view. No doubt subscriptions would be liberal throughout the route of our road.

36. Benefits resulting. No doubt the increase of population, and improvement would be very considerable in a short time, in case the making of a turnpike road was commenced.

37. Where place of business, and who president. At Fannetsburg, where John M'Allen, the president, resides.

38. Should broad wheels go free. No.

39. If not, what exemption. One half.

40. Best form of a road. In our opinion, a convex road is most easily kept in repair.

41. Greater height of centre above the sides. Six inches.

42. Proper depth for materials. This depends much on the nature of the foundation. On a solid foundation, nine inches at the sides and fifteen in the centre, would be a good depth. On some foundations a much greater depth would be necessary.

43. Greatest safe load. All turnpike roads will be more or less injured by transportation in wagons of any description, and will need occasional repairs.

44. Best size or weight of stones. Two or three lbs. weight for the first layer of stones, and the general mass to pass a three inch ring. The top stones smaller, would afford a smooth surface.

45. Were materials near or distant. Near at hand, the greater part of the route.

46. Wages of turnpike laborers. At this time turnpike laborers could be procured at fifty cents per day, they to find their own board.

47. Causes of the present cheapness of road making. Originating partly in the fall in the price of wages and materials, and partly in improved skill and economy in applying labor and materials.

48. Improvements in road making. Many road makers, from practice, have become more perfect in the theory of the business, by means of which labor is much facilitated. They have improved in the skill of levelling the bed of the road, by the use of ploughs and scrapers, as well as in the act of raising, hauling, placing and breaking stone; and in knowledge of the best kind of tools for every purpose.

Susquehanna and Lehigh Turnpike Road Company.

1. Extent. Thirty miles.
2. Commences, at Lausanne, in Northampton county.
3. Terminates, at the bridge over the Susquehanna, in the township of Nescopeck, Luzerne county, and opposite the borough of Berwick.
4. Passes, through Conyngham, a small village about 11 miles from the river, and Nescopeck, another small village at the river. It crosses Nescopeck creek; the Broad, the Spring, the Beech and the Nescopeck mountains.
5. Begun, in the year 1804.
6. Completed, in the year 1806.
10. Capital stock. 25,000 dollars.
11. Price and number of shares. 250 shares, at 100 dollars per share.
12. Private subscriptions. It appears by the entry on the books, that 423 certificates of stock have been issued.
13. State subscription. Ten thousand dollars.
14. Cost. The average cost for 27 miles, was 1,000 dollars per mile, and for three miles, 1500 dollars per mile.
16. Contracts could be made. Probably the average price would now be about 700 dollars per mile.
17. Materials. Where the ground is soft and miry, it is now mostly stoned: the general part of the road is composed of earth and gravel.
18. Size of stones. Where the road is stoned, the bed is formed of stone of a small size in their natural state, well compacted together: the surface and interstices filled up with broken stone that would pass through a ring 2½ inches in diameter.

19. Width. Twenty feet, exclusive of ditches.
20. Depth of materials. When composed of stone, say 15 inches in the centre and 9 inches at the sides.
21. Shape of road. Convex, rising 9 inches in the centre. was the original form of the road, and kept so as far as the funds of the company would allow.
22. Rate of tolls. A loaded wagon with four horses, 16 cents for 5 miles: a pleasure carriage and two horses, 12 cents for five miles: a single man and horse, three cents for five miles. No broad wheel wagons travel this road.
23. Distance of gates apart. There is but one gate, erected at the beginning of the road, thirty miles from the river Susquehanna.
24. Number of managers. A president and twelve managers. Six managers would be sufficient.
25. Average tolls, since erection of gates. The average amount per annum for the last preceding six years, since the present managers conducted the business of the company, is \$1,629 74. Prior to the year 1816, there are some unsettled accounts, which render it impracticable to say at this time what the amount may be.
26. Average tolls, for three years. \$1,566 55.
27. Annual dividend since road commenced. None: the company have hitherto been in debt.
29. Debts. \$1,111 12, to the 21st of January, 1822.
30. Market price of stock. As the company have been and are yet in debt, and the local situation of the road such that it will probably require all the funds of the company to keep it in repair, the value of course will be considered as but little better than nominal.
31. Road liable to be cut up. It is, in wet seasons, particularly in the spring and fall.
32. Quality of road. It is through a hilly mountainous country.
33. Foundation of road. It is, though with many exceptions, generally hard.
34. Prominent advantages. To the settlement bordering on the Susquehanna at the intersection of this road, and to a considerable extent, it has been of great importance. Prior to this communication being opened, they had no outlet to market. The country is now in a flourishing condition, and principally through the medium of this road, which has been an excitement to industry, by enabling them to command a cash price for their produce. The advantages resulting to the state must be proportioned to the improvement and cultivation of the country. In addition, this road, through the medium of the bridge over this river Susquehanna, at the falls of Nescopeck, connects with the Susquehanna and

Tioga turnpike, which is now nearly completed, and through that channel must eventually, open an important communication from the interior of the state of New York, to the metropolis of Pennsylvania.

35. Principal market. The principal market is at Easton, on the Delaware, and the mills in that vicinity, and by that route to Philadelphia.

36. Benefits resulting. An increase both in population and improvement.

37. Where place of business and who president. In the borough of Berwick. The president at this time is Silas Engle, who resides near that place.

38. Should broad wheels go free. There have been no broad wheels used on this route. The question will no doubt be fully answered where they are in use.

40. Best form of a road. Convex, certainly, where the materials are earth and gravel. We conclude the same in a stone road, but perhaps it is not necessary to raise the centre so high.

41. Greater height of centre above the sides. In a road twenty feet carriage way, composed of earth and gravel, we would say it should rise 12 inches in the centre, and half that height in a stone road.

42. Proper depth for materials. We beg to refer the question to the experience, tested in roads composed altogether of stone.

43. Greatest safe load. Broad wheels, as before stated, have never been used on our road. Teams with four horses and narrow wheels, generally take one and a half tons.

44. Best size or weight of stones. We consider the smaller the stones are broken on the surface of the road the better. Those in the foundation may be larger, say such as would pass through a ring 2½ inches in diameter.

45. Were materials near or distant. The stone were generally near at hand: probably the greatest distance one fourth of a mile.


46. Wages of turnpike laborers. 75 cents, finding their own boarding.

47. Causes of the present cheapness of road making. The reduction in the price of wages and materials, and the skill acquired by experience.

48. Improvements in road making. To point out the particular improvements, would perhaps, be useless. We would only say, that practice, by making the art known to many, has prevented the extortion of a few.

Susquehanna and Tioga Turnpike Road Company.

1. Extent. Eighty miles.
2. Commences, at Berwick, in Columbia county.
3. Terminates, in the county of Bradford, near the 70th milestone, on the northern boundary of Pennsylvania, and about six miles from Newtown Poin, New York.
4. Passes. Being generally through an entirely new country, there are no towns upon the route except such as have been laid out since the road was begun, the particulars of which are not known. It crosses Shickshinny mountain, Nob mountain, and the North or Bald mountain; and Brier, Shickshinny. Huntington, Loyalsock, Towanda, Sugar and Bentley's creeks, and their branches.
5. Begun, in the year 1818.
7. Proportion completed. Sixty-four miles are finished and paid for. Sixteen miles remain unfinished.
8. When completion expected. The unfinished 16 miles are contracted for, to be finished during the summer of 1822.
9. Unfinished spaces. At the north end only.
10. Capital stock. 600 shares, of 100 dollars each, to be taken by individuals.
12. Private subscriptions. About 48,400 dollars: about 7,000 dollars of which was expended in the years 1806 and 1807, in an abortive attempt to open this road.
13. State subscription. 30,400 dollars.
14. Cost. The prices have varied from 560 to 1,300 dollars per mile. The average cost of 64 miles is about \$880 per mile. This average is exclusive of bridges, which may be set down at 4,000 dollars. It is also exclusive of surveys, superintendence, reviews, and a variety of incidental expenses, the particulars of which are not deemed important. The aggregate of these, if also averaged, might raise the 64 miles to 900 dollars per mile, exclusive of bridges,
15. Contracts made. At about 560 per mile.
17. Materials. Earth and stone, but no timber. Much of the country near the middle of the route is rocky, and there the rocks have been broken up, so as to make what is termed a stoned road. The other parts are generally the natural earth.
18. Size of stones. The size directed by the board, were to pass through a ring 2½ inches in diameter.
19. Width. Twenty-seven feet carriage way, three feet ditches and slopes, and the timber is cut away 25 feet on each side, so as to make the whole opening 80 feet through the timbered country, which includes a large proportion of the distance.

20. Depth of materials. This is not known.
21. Shape of road  See reply to 40th question.
22. Rate of toll. As prescribed by the act of incorporation.
23. Distance of gates apart. But one gate is as yet erected. It is about 20 miles from Berwick.
24. Number of managers. There are twelve managers, and the number is not found inconvenient.
25. Average tolls, since erection of gates. Travelling on this road cannot be expected until it is opened quite to the northern boundary of the state. The tolls hitherto received, have been of trifling amount. No dividend has as yet been made.
29. Debts. The company is not in debt.
30. Market price of stock. No recent sales are known of, by which to answer this question.
31. Road liable to be cut up. Our experience does not enable us to reply.
32. Quality of road. The country is various, and includes each of the kinds here specified. Nearly fifty miles of it was an unpenetrated wilderness, previous to the making of this road.
33. Foundation of road. Generally hard.
34. Prominent advantages. The road will open a direct intercourse between the iron and coal district of Pennsylvania and the salt and gypsum districts of New York. It will be also the nearest route by which the grazing counties of Pennsylvania can be supplied with cattle. Its north end also strikes the point on the Tioga where that river is proposed to be connected with the Seneca lake by a canal; and if continued south eastward from Berwick to the head of the Schuylkill navigation, a distance of about 25 miles, would form the shortest communication between the eastern parts of Pennsylvania and the western parts of New York.
35. Principal market. Grain and other agricultural products, generally pass from Berwick, at the south end of this road, to Easton, on the Delaware. Cattle, and other live stock, come to Philadelphia or the neighboring counties.
36. Benefits resulting. There has been a considerable increase of population and improvement upon the road, since it was begun.
37. Where place of business, and who president. At the office of the president, George Vaux, Philadelphia. Four of the managers, who reside near Berwick, transact the business of the company at that place.
38. Should broad wheels go free. On this point the company has not any experience, broad wheels not being used on the road.

40. Best form of a road. Where the ascents and descents are sufficient to carry off the water, a flat road is deemed best: on a level surface, there should be a sufficient convexity to turn off the water, and no more.

42. Proper depth for materials. Our experience does not enable us to give an opinion upon this point.

44. Best size or weight of stones. To pass through a ring of $3\frac{1}{2}$ inches in diameter, is the rule adopted for this road.

45. Were materials near or distant. They were all near at hand.

46. Wages of turnpike laborers. The road having been made by contracts, at a specific sum per mile, the company does not possess the information necessary to answer this question.

47. Causes of the present cheapness of road making. In part, to the fall in the price of wages and materials, and in part to improved skill and economy in the application of labour and materials, but principally, it is supposed, to the former.

48. Improvements in road making. The company does not possess the information needful to enable them to answer this inquiry with correctness.

Susquehanna and Waterford Turnpike Road Company.

1. Extent. 126 miles and a fraction.

2. Commences, at the Susquehanna river, near the mouth of Anderson's creek, in Clearfield county.

3. Terminates, at Waterford in Erie county.

4. Passes, through Curwinville, in Clearfield county, Franklin, in Venango county, and Meadville, in Crawford county. Streams crossed are, Anderson's creek, Sandylick, Millcreek and the north branch of Redbank, all bridged by the company; Clarion river, or Toby's creek; Sandy, or Six Mile creek; the Allegheny river, near Franklin, 244 yards wide, not bridged; Frenchcreek, at Franklin; bridged by an incorporated company; Big Sugar creek, bridged by the county of Venango, the bridge worn out nearly; Little Sugar creek and Woodcock creek, both bridged by the company; Frenchcreek, $12\frac{1}{2}$ miles north of Meadville, bridged by subscription, the bridge repaired by the company; the outlet of Le Boeuff Lake, little Le Boeuff creek, bridged by Erie county; the inlet at Waterford, bridged by the company. At some seasons of the year much difficulty will exist for want of a bridge over the Allegheny river, to effect which the company have no funds. Said river will be the only water not bridged. No hills of magnitude.

5. Began, in 1818.

6. Completed. Not yet completed.
7. Proportion completed. $117\frac{1}{2}$ miles.
8. When completion expected. In June 1822.
9. Unfinished spaces. Between Meadville and Franklin.
10. Capital stock. \$175,000 by law of 1812, and 15,000 dollars by supplement of 1821.
11. Price and number of shares. Twenty-five dollars per share, and 7,000 shares.
12. Private subscriptions. 51,075 dollars of which much is expected to be lost.
13. State subscription 5,000 shares by first law, and 600 by supplement.
13. Cost. Near 1450 dollars per mile, including all costs of location, managers, &c.
17. Materials. Clay and gravel: timber, where swampy, is laid in the foundation.
19. Width. Between ditches, 24 feet.
20. Depth of materials. The arch of the road is two feet in the centre, perpendicular, to the crown.
21. Shape of road. Convex.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, 12 cents for five miles; ditto, with narrow wheels and four horses, 16 cents for five miles; a pleasure carriage with two horses, 12 cents for five miles; a single man and horse, three cents for five miles.
23. Distance of gates apart. East of Allegheny river are two gates, which collect tolls for eighty miles, the first seven miles from the Susquehanna river, the second 18 miles from Allegheny river; two gates between Franklin and Meadville, about three miles from each place; two gates between Meadville and Waterford, one $2\frac{1}{2}$ north of Meadville, and the other seven miles south of Waterford. It is intended to place an additional gate in the centre, east of Allegheny river, next spring.
24. Number of managers. A president and twelve managers. Considering the extent of the road, we think the number not too great.
25. Average tolls, since erection of gates. We cannot satisfy this query, as the whole road is not yet licensed. The gate next to the Susquehanna river has not been licensed more than fifteen months, and some of the other gates erected a year.
27. Annual dividend. &c. None made.
- 29 Debts. 9,000 dollars to the North Western Bank of Pennsylvania. Other debts will become due when the unfin-

ished parts are completed, which it is expected can be paid out of the present funds.

30. Market price of stock. No sales.

31. Road liable to be cut up. In the spring and fall seasons, if wet, parts of the road, where the general surface of the country is flat and a great depth of vegetable soil, will cut with wagons; at other seasons very little impression is made.

32. Quality of road. The road is smooth, and passes over an uneven country, though not hilly, except near streams.

33. Foundation of road. Generally hard.

34. Prominent advantages. The transportation of iron, and the facility of carrying produce in exchange. The distance to the seat of government is shortened, and to the commercial metropolis of the state, 60 miles. Wagons formerly passed round by Pittsburg. It is expected many articles will bear transportation to Philadelphia with advantage, by the diminution of the price of carriage, and large droves of live stock are taken to the seaboard by this road.

35. Principal market. None is carried from the vicinity of the road, except to exchange for iron in Centre county.

36. Benefits resulting. Many improvements have been commenced, and we anticipate great advantages in this respect.

37. Where place of business, and who president. At Meadville, where the president, William Foster, resides.

38. Should broad wheels go free. We think not.

39. If not, what exemption. None.

40. Best form of road. Convex.

41. Greater height of centre above the sides. Sufficient to drain the road of water. Say, when settled, 18 inches.

42. Proper depth for materials. We have not yet had experience on this point, to answer with precision.

43. Greatest safe load. In dry weather cannot be too heavy.

44. Were materials near or distant. Near at hand.

45. Wages of turnpike laborers. In 1818, by the month, 18 dollars and board; in 1821, ten dollars and board. The usual terms of hiring being by the month and not by the day.

46. Causes of the present cheapness of road making. Principally by a fall in the price of wages and provisions.

47. Improvements in road making. We know of no particular improvements in the art of constructing such roads as ours, except that eastern men, with skill derived from experience, have recently taken contracts, and have made better road, at lower

prices, than those persons who first commenced on our road, and who had not experience.

Susquehanna and York Turnpike Road Company.

1. Extent. Between 11 and 12 miles.
2. Commences, at the river Susquehanna, York county.
3. Terminates, at York borough, York county.
4. Passes, through Wrightsville and part of York: but few hills that require reducing to four degrees: several streams, but none of considerable magnitude.
5. Begun, in 1809.
6. Completed, in 1810.
10. Capital stock. 35,000 dollars.
11. Price and number of shares. 100 dollars—350 shares.
12. Private subscriptions. 337 shares paid: the remainder forfeited.
13. State subscription. 5,000 dollars.
14. Cost. About 4,000 dollars per mile, including bridges and toll houses.
17. Materials. Stone.
18. Size of stones. To pass through a three inch ring.
19. Width. Twenty-one feet.
20. Depth of materials. 12 inches in the centre and nine at the sides.
21. Shape of road. Convex.
22. Rate of tolls. A loaded wagon with (4 inches) broad wheels, seven cents each horse; ditto, narrow wheels, 14 cents ditto; a pleasure carriage and two horses, 28 cents; a single man and horse, seven cents.—The foregoing tolls are for the whole distance.
23. Distance of gates apart. About 6 miles.
24. Number of managers. Twelve: but have petitioned the present legislature to reduce the number. When a road is finished, a less number of managers can conduct the affairs of the company.
25. Average tolls, since erection of gates. About 2,500 dollars.
26. Average tolls, for three years. About 2,000 dollars.
27. Annual dividend, since road commenced. No dividend declared until June 1818. Since that time six per cent. and upwards,

28. Annual dividend for three years. Six and five sixths per cent.

29. Debts. None. When the road was finished the company was in debt about thirteen thousand dollars, which was extinguished in 1818, and the road kept in repair, by the receipts of toll up to that time.

30. Market price of stock. At about 90 dollars per share some could be purchased.

31. Road liable to be cut up. It is liable, and mostly so in the spring season.

32. Quality of road. Smooth: a level country.

33. Foundation of road. Generally hard.

34. Prominent advantages. 1. The dividend to the state. 2. Facilities of intercourse and transportation of heavy commodities, especially the conveyance of lumber from the river to the interior. 3. As a section of the shortest road from Philadelphia to Pittsburg, which is now turnpiked all the way.

35. Principal market. Baltimore, by this road, and the Maryland line turnpike.

36. Benefits resulting. A very considerable increase of population and improvement in the vicinity of the road, since its commencement.

37. Where place of business, and who president. York. Jacob Eichelberger, president, resides at York.

38. Should broad wheels go free. No.

39. If not, what exemption. About one half.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. From eight to ten inches.

42. Proper depth for materials. The deeper the more durable. All roads are liable to be cut through, in time.

43. Greatest safe load. A load of four tons seems to make no impression, on either broad or narrow wheels, unless in very wet weather.

44. Best size or weight of stones. To pass through a three inch ring, is considered sufficiently small.

45. Were materials near or distant. Some limestones were quarried near the road; others had to be hauled a mile or more.

46. Wages of turnpike laborers. One dollar per day—during the last year, about 75 cents per day.

47. Causes of the present cheapness of road making. Mostly by the fall in the price of wages.

Washington and Williamsport Turnpike Road Company.

1. Extent. 19 miles.
2. Commences, at Washington, in Washington county.
3. Terminates, at Williamsport, on the Monongahela river, in Washington county.
4. Passes, through no towns, nor over any large streams nor hills.
5. Begun, in the year 1819.
6. Completed. Not yet completed.
7. Proportion completed. Five and three-fourth miles will be completed by contract on the first of November, 1822.
9. Unfinished spaces. It is unfinished from Mr. John Love's, five and a fourth miles from Williamsport, until within half a mile of Washington.
10. Capital stock. 40,000 dollars.
11. Price and number of shares. Eight hundred shares, of fifty dollars each.
12. Private subscriptions. Ten thousand five hundred dollars is paid by stockholders.
13. State subscription. 10,000 dollars.
14. Cost. 2,330 dollars per mile.
15. Contracts made. None made.
16. Contracts could be made, at two thousand dollars per mile;
17. Materials. Stone.
18. Size of stones. These on the top to pass through a three inch ring.
19. Width. Twenty-one feet
20. Depth of materials. Sixteen inches in the centre and eleven at the sides.
21. Shape of road. Convex, and ten inches higher in the centre than at the sides.
24. Number of managers. One president and twelve managers:
30. Market price of stock. No sales.

31. Road liable to be cut up. That part of our road which has been finished 18 months, has not been injured by wagons, although it has been much travelled.

32. Quality of road. The road is smooth, but the country through which it passes is hilly.

33. Foundation of road. Generally hard.

34. Prominent advantages. The advantages to the neighborhood are great, on account of the easy carriage of produce to market, which it affords, and to the state, on account of its being the leading road from Philadelphia to Wheeling, on the Ohio river.

35. Principal market. Williamsport, on the Monongahela river, and Philadelphia and Baltimore.

36. Benefits resulting. There has been a considerable share of improvements, since the commencement of our road.

37. Where place of business, and who president. Generally at the house of John Love. The president, James Haire, resides on Pigeon creek, near the road.

38. Should broad wheels go free. No.

39. If not, what exemption. Not able to decide at present.

40. Best form of a road. A convex road, in our opinion, is the most durable.

41. Greater height of centre above the sides. About ten inches.

42. Proper depth for materials. Sixteen inches in the centre, and eleven inches at the sides.

44. Best size or weight of stones. The under stone about three inches thick and twelve inches deep in the centre, and in proportion at the sides.

45. Were materials near or distant. Near at hand, and easily procured.

46. Wages of turnpike laborers. About fifty cents per day.

47. Causes of the present cheapness of road making. The joint influence of the reduction of the price of labor and materials, and improved skill and economy in applying them.

Waynesburg and Greencastle Turnpike Road Company.

1. Extent. Forty-two miles.

2. Commences, at the Maryland line, Adams county.

3. Terminates, at M'Connellstown, Bedford county.

4. Passes, through Waynesburg, Greencastle and Mercersburg over two branches of Antiatim creek, and West Conococheague creek; and over the south and north mountains.

5. Begun, in the year 1819.
6. Completed. Not yet completed.
7. Proportion completed. Twenty-four miles 73 perches.
8. When completion expected. Uncertain—eight miles more will be completed in twelve months.
9. Unfinished spaces. In the centre.
10. Capital stock. Eight hundred or more shares.
11. Price and number of shares. One hundred dollars per share: 1,140 shares.
12. Private subscriptions. 114,000 dollars—87,699 dollars paid, 26,310 dollars unpaid: 11,000 dollars supposed.
13. State subscription. 15,000 dollars.
14. Cost. 3,792 dollars per mile; bridges, &c. included.
15. Contracts made. At 2,100 dollars per mile.
16. Contracts could be made. At 1,920 dollars per mile.
17. Materials. Stone, gravel, &c.
18. Size of stones. To pass through a ring of three inches in diameter.
19. Width. Twenty feet.
20. Depth of materials. One foot.
21. Shape of road. One inch higher in the centre.
22. Rate of tolls. One cent six mills per mile, for a loaded wagon with broad wheels and four horses; three cents two mills per mile, for ditto with narrow wheels and four horses; two and a half cents per mile, for a carriage and two horses; one cent two mills per mile, for a single man and horse.
23. Distance of gates apart. Three gates only erected as yet.
24. Number of managers. Twelve: six would be sufficient.
25. Average tolls, since erection of gates. 2,810 dollars.
26. Average tolls, for three years. Commenced, October 1820
29. Debts. 500 dollars.
30. Market price of stock. No late sales.
31. Road liable to be cut up. No: it is well made.
32. Quality of road. Smooth—level generally, except the mountains.
33. Foundation of road. Generally hard.
34. Prominent advantages. Very great, on account of transporting our produce to market; connects with the road leading from

Waynesburg to Philadelphia, via Gettysburg and York; also, by a law authorising a turnpike road from Mercersburg to intersect the United States road, at or near Hancock.

35. Principal market. Philadelphia and Baltimore.

36. Benefits resulting. Improvements have been very considerable.

37. Where place of business, and who president. Greencastle: president, John M'Lanachan, near Greencastle.

38. Should broad wheels go free. No.

39. If not, what exemption. At least one-half.

40. Best form of a road. Nearly flat

41. Greater height of centre above the sides. Not more than two inches.

42. Proper depth for materials. Twelve inches is sufficient on our route.

43. Greatest safe load. Broad wheels, any weight; narrow wheels, two to three tons.

44. Best size or weight of stones. The smaller the better.

45. Were materials near or distant. Generally near.

46. Wages of turnpike laborers. Eight to twelve dollars per month, when we commenced; in 1821, from five to eight dollars.

47. Causes of the present cheapness of road making. The reduction of the price of labor and materials, and improvement in the skill and economy of applying them.

48. Improvements in road making. Practice, experience, &c.

York and Gettysburg Turnpike Road Company.

1. Extent. Between twenty-eight and twenty-nine miles.

2. Commences, at the west end of the bridge, in the borough of York.

3. Terminates, at the court house in the borough of Gettysburg.

4. Passes, through part of the town of York, Abbottstown and Oxford, to Gettysburg; over several streams, of which the little Conawago and Rock creek are the most considerable. Hills but few, and none above four degrees.

5. Begun, in 1818.

6. Completed, in 1820.

10. Capital stock. Ninety thousand dollars.

11. Price and number of shares. One hundred dollars per share: some are lost, and others are in suit.

13. State subscription. Forty thousand dollars.
14. Cost. Four thousand dollars per mile.
17. Materials. Stone.
18. Size of stones. To pass through a three inch ring.
19. Width. Twenty-one feet.
20. Depth of materials. Fourteen inches in the centre, and ten inches at the sides.
21. Shape of road. Convex, rising eight inches in the centre.
22. Rate of tolls. A loaded wagon with broad wheels and four horses, three cents at each gate; ditto, with narrow wheels and four horses, six cents at each gate; a pleasure carriage with two horses, twelve and a half cents at each gate; a single man and horse, three cents at each gate.
23. Distance of gates apart. Six miles.
24. Number of managers. Twelve—six too many.
25. Average tolls, since erection of gates. About \$ 2,230.
29. Debts. About \$6,500.
30. Market price of stock. No sales lately.
31. Road liable to be cut up. In the spring season.
32. Quality of road. Smooth—level and good country.
33. Foundation of road. Hard and good.
34. Prominent advantages. Facilitating the intercourse between the eastern and western parts of the state, for the transportation of lumber from the Susquehanna into the interior of the state.—The route between Philadelphia and Pittsburg being now completed, it is from twelve to fifteen miles nearer than any other route leading in the same direction.
35. Principal market. Baltimore.
36. Benefits resulting. Improvements have been made and population increased.
37. Where place of business, and who president. At York and Gettysburg; and the president, John Demuth, resides in York.
38. Should broad wheels go free. No.
39. If not, what exemption. What the law allows.
40. Best form of a road. Convex.
41. Greater height of centre above the sides. From eight to ten inches.
42. Proper depth for materials. The deeper the better, as all roads are liable to be cut up in time.
43. Greatest safe load. A wagon loaded with three and a half tons will make little impression upon our road.

44. Best size or weight of stones. To pass through a three inch ring.

45. Were materials near or distant. Some near, and others not so near at hand.

46. Wages of turnpike laborers. Labor is lower now than when the road was making. Laborers to repair the road, have been obtained at 75 cents per day.

47. Causes of the present cheapness of road making. Owing to the fall in the price of labor.

York and Maryland Line Turnpike Road Company.

1. Extent. About eighteen miles.

2. Commences, at the borough of York, York county.

3. Terminates, at the line between Pennsylvania and Maryland.

4. Passes, through the village of Strasburg, and over Codorus creek and Codorus hills.

5. Begun, in 1807.

6. Completed, 1809.

10. Capital stock. 70,000 dollars, and augmented to 380,800.

11. Price and number of shares. Seven hundred shares, at one hundred dollars each.

12. Private subscriptions. Amount as above.

13. State subscription. Nothing.

14. Cost. About \$4,500 per mile, including bridge over Codorus.

15. Contracts made. None to make.

16. Contracts could be made. Uncertain.

17. Materials. A small proportion of it granite and limestone, but the greater part of it soft, but chiefly covered with flint.

18. Size of stones. To pass through a three inch ring, if the stones are good, but if otherwise, larger.

19. Width. About twenty feet.

20. Depth of materials. When first made, about twelve inches at the sides and in the centre respectively; but by repairs made much deeper in the centre.

21. Shape of road. Flat, originally, but now convex, round two or three inches.

Rate of tolls. For six miles, viz:

Cart or wagon, wheels	4 inches or under, each horse	12½ cents,
Ditto do	4 do and under 7, do	do 6¼
Ditto do	7 do and under 10, do	do 5
Ditto do	10 do and under 12, do	do 3 1-8
Ditto do	12 do do	do 1½
A pleasure carriage with two horses, for six miles,		25
A single man and horse for six miles,		6¼

23. Distance of gates apart. Three gates on the 18 miles.

24. Number of managers. A president and twelve managers. The number is not too great, as they act gratis.

25. Average tolls since erection of gates. \$5,189.

26. Average tolls for three years. \$5,277.

27. Annual dividend since road commenced. Three declared in fifteen years, of three per cent. each time.

28. Annual dividend for three years. One, of three per cent.

29. Debts. Not exceeding two thousand dollars.

30. Market price of stock. About one half the first cost.

31. Road liable to be cut up. Being composed of soft materials generally, is often cut up, particularly at the breaking up of the frost.

32. Quality of road. Tolerably smooth: it passes over a hilly country.

33. Foundation of road. Generally of a loose isinglass soil.

34. Prominent advantages. By carrying double the quantity at a load, and performing the trip in about half the time.

35. Principal market. Baltimore, by a turnpike road from the Pennsylvania and Maryland line to Baltimore.

36. Benefits resulting. A considerable increase of population and improvement in the vicinity of the road, since its commencement.

37. Where place of business, and who president. Elections are held at the borough of York; the treasurer resides there, who keeps the accounts; and the president, William Patterson; resides in Baltimore.

38. Should broad wheels go free. No, unless the wheels are fourteen inches wide, as prescribed in the charter.

39. If not, what exemption. One half.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. About three inches in the centre of twenty feet.

42. Proper depth for materials. According to the ground and materials.

43. Greatest safe load. Any weight, not exceeding three and a half tons (including wagon) on broad wheels, and one half that weight on narrow wheels.

44. Best size or weight of stones. If the stones are hard, the size of a walnut makes the best road.

45. Were materials near or distant. Not far distant.

46. Wages of turnpike laborers. One dollar per day at commencement; at present seventy-five cents.

47. Causes of the present cheapness of road making. Chiefly by a fall in the price of labor and materials.

York and Conawago Canal Turnpike Road Company.

1. Extent. Eleven miles.

2. Commences, at Codorus creek, York county.

3. Terminates, at the head of Conawago falls, York county.

4. Passes, through the village of Liverpool, and over Canawago creek.

5. Begun, in 1811.

6. Completed in 1812.

10. Capital stock. \$60,000.

11. Price and number of shares. Six hundred shares, at one hundred dollars each.

12. Private subscriptions. Amount stated above.

13. State subscription. Nothing.

14. Cost. \$5,500 per mile, and 21,000 dollars for bridge over Conawago creek.

15. Contracts made. None to make.

16. Contracts could be made. Uncertain.

17. Materials. Generally granite and limestone.

18. Size of stones. To pass through a three inch ring.

19. Width. About twenty feet.

20. Depth of materials. When first made, fifteen inches in the centre, and twelve inches at the sides.

21. Shape of road. Convex—rising three inches in the centre.

22. Rate of tolls. Per mile—a loaded wagon with broad wheels and four horses, three and a half cents; ditto, narrow wheels and four horses, seven cents; a pleasure carriage and two horses, three and a half cents; a single man and horse, seven cents for whole route.

23. Distance of gates apart. Two gates on eleven miles.

24. Number of managers. A president and twelve managers. The number is not considered too great, as they all act gratis.

25. Average tolls since erection of gates. \$1,955.

26. Average tolls, for three years. \$1,841.

29. Debts. \$8,100.

30. Market price of stock. None in market.

31. Road liable to be cut up. This road is solid, and bears heavy travelling, without being much cut or injured.

32. Quality of road. Smooth road—over a tolerably level country.

33. Foundation of road. Hard.

34. Prominent advantages. Carrying double the quantity at a load, and performed in about one half the time.

35. Principal Market. Philadelphia and Baltimore, through York.

36. Benefits resulting. A very considerable increase of population and improvement in the vicinity of the road, since commenced.

37. Where place of business, and who president. Elections are held in the borough of York. The treasurer resides there, and keeps the accounts. The president, William Cole, resides in Baltimore.

38. Should broad wheels go free. No. Unless the wheels are fourteen inches, as prescribed in the charter.

39. If not, what exemption. One half.

40. Best form of a road. Convex.

41. Greater height of centre above the sides. About 3 inches in the centre of 20 feet, or different according to the situation of the ground and materials.

42. Proper depth for materials. According to the ground and materials.

43. Greatest safe load. Any thing not to exceed 3½ tons (including wagon) on broad wheels; and one half that weight on narrow wheels.

44. Best size or weight of stones. Depends on the quality of stone. If solid and hard, the size of a walnut on the top, makes the best road.

45. Were materials near or distant. The stones were near the road.

46. Wages of turnpike laborers. At commencement, one dollar per day: at present, about 75 cents.

47. Causes of the present cheapness of road making. The fall in price of labor and materials, and improved skill in the application of them.

48. Improvements in road making. By making a solid foundation and smooth surface.

BRIDGES.

Questions, Submitted to the President and Managers of the Company, for erecting a Bridge over—

1. What is the length and breadth of your bridge?
2. By how many piers and arches is it supported?
3. Of what materials are the piers composed?
4. What is the elevation of the floor of the bridge above the usual level of the water?
5. Is the bridge painted on the outside?
6. Has it a roof?
7. Is there a foot-way on each side?
8. How many head of cattle are permitted to pass the bridge at a time?
9. In what years was the building of the bridge commenced and completed?
10. In what counties and near what towns, are its two ends situated?
11. What was the capital stock of the company authorized by law?
12. What was the original price and number of shares?
13. What was the actual amount subscribed and paid, or expected to be paid, by individuals and companies?
14. How much was subscribed by the state?
15. What is the rate of tolls, for
A loaded wagon and four horses?
A pleasure carriage with two horses?
A single man and horse?
A drove of cattle per head?
16. How many managers conduct the affairs of the company and is the number too great?
17. At what place is the business of your company conducted, and who is the present president, and where does he reside?
18. What has been the average amount of tolls received *per annum*, since they were first authorized to be collected?
19. What has been the average amount *per annum* during the last three years?
20. What annual dividend has been made upon an average, since the bridge was completed?
21. What annual dividend has been made upon an average during the last three years?
22. What is the amount of the existing debts of the company, if any?
23. What is the present market price of the stock?

The following answers have been received to the foregoing questions:

From the Company for erecting a bridge over the river Allegheny, at Pittsburg.

1. Dimensions. The length of the bridge is 1,122 feet from abutment to abutment, its breadth 38 feet. The wing walls extend on the south side 220 feet, and on the north 240 feet.
2. Number of piers and arches. Five piers and six arches.
3. Materials of piers. Hammer dressed stone.
4. Elevation of floor. Thirty-eight above low water mark, and four feet above the highest rise of the river ever known.
5. Painted. It is.
6. Roof. It has a roof of jointed pine shingles.
7. Footways. There are footways on each side, on the outside of the weatherboarding.
8. Cattle permitted to pass. Not more than ten at once.
9. Commenced and completed. It was commenced in 1817, so far completed as to admit of being crossed in 1819, and completed in 1821.
10. Where situated. In the county of Allegheny, at Pittsburg.
11. Capital stock. The company was to be incorporated when 1,600 shares were subscribed.
12. Price and number of shares. The original amount subscribed was 2,273 shares, at 25 dollars per share.
13. Private subscriptions. Payments were made on 1,941 shares, amounting to thirty-nine thousand four hundred and thirty-five dollars, and it is believed about six thousand dollars more will be paid.
14. State subscription. 40,000 dollars.
15. Rate of tolls. A loaded wagon and four horses, 50 cents, a pleasure carriage with two horses, 62½ cents, (the rates allowed by law:) a single man and horse, 6½ cents; a drove of cattle per head, 4 cents.
16. Number of managers. The affairs of the company are transacted by a president and ten managers. No objections have been made to that number.
17. Where place of business, and who president. The business of the company is conducted at Pittsburg. William Robinson, jr. is the present president, and resides on the north side of the Allegheny river, opposite Pittsburg.

18. Average amount of tolls, since authorised to be collected. The company commenced taking tolls the 28th October, 1819. From that time to the 31st October, 1820, inclusive, there were received \$6,029 18. From the 1st November, 1820, to 31st October, 1821, inclusive, \$5,301 87 were received; and from that time to 1st February, 1822, \$1,228 50 have been received.

22. Debts. \$9,814 20.

23. Market price of stock. No sales have been made.

Company for erecting a Bridge over Big Beaver, near Wolf Lane.

1. Dimensions. It was six hundred feet long and twenty feet wide.

2. Number of piers and arches. It was supported by three piers and four arches.

3. Materials of piers. They were of timber.

4. Elevation of floor. It was forty feet above the usual level of the water.

5. Painted. It was not.

6. Roof. It had a roof.

7. Footways. There were none.

8. Cattle permitted to pass. Ten head at one time.

9. Commenced and completed. Commenced in 1815, and finished in 1816.

10. Where situated. West end near Beaver town: all in Beaver county.

11. Capital stock. No sum specified.

12. Price and number of shares. Between nine and ten thousand dollars.

15. Rate of tolls. See act of assembly, incorporating the Brighton bridge company.

16. Number of managers. A president and six managers. The number not considered too great.

17. Where place of business, and who president. The business was conducted at the toll house, and Joseph Hemphill is the present president, and resides in Beaver.

18. Average tolls, since authorised to be collected. \$ 1,219.

19. Average tolls, for three years. One thousand and six dollars a year.

20. Annual dividend, since completed. The income of the bridge being expended in covering, weatherboarding, &c. no precise answer can be given.

22. Debts. Not much.

Company for erecting a Bridge over the Big Beaver, at Brighton.

1. Dimensions. Old one, five hundred feet long and twenty feet wide. The new bridge contemplated to be built, is to be three hundred and fifty feet long, and twenty-eight feet wide.

2. Number of piers and arches. The former bridge had four piers and five arches. The new one is to have one pier and two arches.

3. Materials of piers. The former bridge, wooden frame: the new one to be of good freestone.

4. Elevation of floor. About eighteen feet, old one and new.

5. Painted. It is to be painted: the old one was not.

6. Roof. It is to be roofed. The old one had no roof.

7. Footways. Old one, none; new one, undetermined.

9. Commenced and completed. Begun in 1814, completed in 1815, and destroyed in 1818.

10. Where situated. In Beaver county, at the town of Brighton.

11. Capital stock. The former, six thousand dollars: the proposed one, eight or nine thousand dollars.

12. Price and number of shares. Of former bridge, two hundred and forty shares, at twenty-five dollars each.

13. Private subscriptions. Six thousand dollars, former one.

14. State subscription. To the former, nothing; to the new one, about five thousand or six thousand dollars.

15. Rate of tolls. Former rates, for a loaded wagon and four horses, fifty cents; a pleasure carriage with two horses, fifty cents; a single man and horse, six cents; a drove of cattle per head, two cents.

16. Number of managers. Six managers and a president: not too great.

17. Where place of business, and who president. At Brighton, where the president resides.

18. Average tolls, since authorised to be collected. Commenced receiving toll on the 11th November, 1815, and on the first

April, 1816, there was a dividend of four per cent. or one dollar on each share; but owing to the imperfection of the plan, opening and repairing roads, &c. no other dividend was made.

19, 20, 21. See answer to No. 18.

22. Debts. Little or nothing.

23. Market price of stock. No price:

Company for erecting a Bridge over the Conemaugh river, on the northern route.

1. Dimensions. Length 295 feet: breadth, 28 feet.

2. Number of piers and arches. One arch.

4. Elevation of floor. 35 feet.

5. Painted. It is to be painted.

6. Roof. To be roofed with jointed shingles.

7. Footways. None.

8. Cattle permitted to pass. Fifteen head, at one time.]

9. Commenced and completed. Commenced in 1821, and to be finished in 1822.

10. Where situated. The eastern end in Indiana county, the western end in Westmoreland. Blairsville is situated on the east bank, and Bardstown on the west.

11. Capital stock. 15,000 dollars.

12. Price and number of shares. 300 shares, at 50 dollars per share.

13. Private subscriptions. 10,000 dollars.

14. State subscription. 5,000 dollars.

16. Number of managers. Six.

17. Where place of business and who president. At Blairsville. Andrew Brown, the president, resides there.

Company for erecting a Bridge over the Delaware, at Trenton.

1. Dimensions. 1,064 feet, measuring on the floor of the bridge; 1,008 feet between face of the abutments; including wing-walls, one quarter of a mile.

2. Number of piers and arches. Four piers and five arches.

3. Materials of piers. Solid stone masonry: exterior, of cut stone.

4. Elevation of floor. Average, 28 feet.
5. Painted. It is.
6. Roof. It has a roof.
7. Footways. It has, five feet wide: carriage ways, eleven feet each.
8. Cattle permitted to pass. Twenty head at one time, but some times there has been fifty or more, on the bridge at same time.
9. Commencement and completion. First stone laid May 21, 1804. The bridge opened to public use on January 30th, 1806.
10. Where situated. East end, in Burlington county, one half mile from Trenton: west end; Morrisville, Bucks county.
11. Capital stock. 2,000 shares, at \$100 per share.
13. Private subscriptions: The whole amount of shares was subscribed; and 80 dollars on each share was called for and paid—actual amount \$160,000.
14. State subscription: Nothing, by either state.
15. Rate of tolls. A loaded wagon and four horses, 75 cents; a pleasure carriage and two horses, 62½ cents; a single man and horse, 18½ cents; a drove of cattle per head, 6½ cents, reckoning 13 to a dozen.
16. Number of managers. Six managers and a president. Number not too great.
17. Where place of business, and who president. At Trenton. President, John Beatty, resides at Trenton, New Jersey.
18. Average tolls, since authorised to be collected. 8,875 dollars.
19. Average tolls, for 3 years. 8,303 dollars.
20. Annual dividend since completed. Five per cent.
21. Annual dividend, for three years. Four and one half per cent.
22. Debts. None.
23. Market price of stock. From 50 to 60 dollars, for 80 dollars paid.

Company for erecting a Bridge over the Delaware; at New Hope.

1. Dimensions. Length 1,050 feet between the abutments. Piers 42 feet, bridge 33 feet wide.

2. Number of piers and arches. Five piers; six arches, of 175 feet each.
3. Materials of piers. Of dressed stone laid with mortar.
4. Elevation of floor. About 21 feet.
5. Painted. No: it is whitewashed.
6. Roof. It is roofed, and the sides are weatherboarded.
7. Footways. There are footways.
8. Cattle permitted to pass. Ten head at one time.
9. Commencement and completion. Commenced in April, 1813, and the first carriages crossed on the 12th September, 1814. The roof and weatherboarding finished during the summer of 1815.
10. Where situated. East end at Lambert's hill, Hunterdon county, New Jersey; west end, New Hope, Bucks county, Pennsylvania.
11. Capital stock. 50,000 dollars; which, if found insufficient to complete the bridge; the president, managers and company were authorised to increase the number of shares to such extent as they may deem advisable.
12. Price and number of shares. 50 dollars per share, 1000 shares.
13. Private subscriptions. Original and additional stock, one hundred and sixty thousand dollars.
14. State subscription. This company received no aid from the state.
15. Rate of tolls. A loaded wagon and four horses, 63 cents; a pleasure carriage with two horses, 50 cents; a single man and horse, 12½ cents; a drove of cattle per head, 3 cents.
16. Number of managers. One president and six managers, (three from New Jersey, and three from Pennsylvania.) The number well adapted to the business.
17. Where place of business, and who president. In New Hope. William Maris is president, and resides in New Hope.
18. Average tolls, since authorised to be collected. \$2,673 12.
19. Average tolls, for three years.
20. Annual dividend, since completed. 5 625-1000 per cent.
21. Annual dividend, for three years. 5½ per cent.
22. Debts. No debt.
23. Market price of stock. From 49 to 50 dollars per share. Very few sales.

Company for erecting a Bridge over the Delaware, at Easton.

1. Dimensions. Length five hundred and seventy feet: breadth twenty-nine feet.

2. Number of piers and arches. It consists of three nearly equal arches, supported by an abutment on each shore, and two piers in the bed of the river, one of them sunk in above twenty feet water.

3. Materials of piers. Of wood and stone, below low water mark, and of solid masonry of stone and mortar above low water mark. The pier heads, or ice-breakers, are of massive timber, faced with oak plank, and filled up with loose stone.

4. Elevation of floor. From the crown or apex of the middle arch to the surface of low water, forty-five feet.

5. Painted. The bridge is weatherboarded at the sides, and has a roof of pine shingles. The weatherboarding is painted: the roof is not painted.

7. Footways. There are none; but the floor of the bridge is longitudinally divided into two carriage ways, of equal width, to prevent the collision of carriages passing in opposite directions.

8. Cattle permitted to pass. The number has never been limited. It has been usual, however, to divide very large droves into convenient sections, to prevent confusion.

9. Commencement and completion. The erection of the abutments and piers, had been effected at various times and in different years, antecedent to 1806. In the year last mentioned the superstructure was commenced and finished, except the enclosure and roof, which was accomplished in the succeeding year.

10. Where situated. The east end is in Greenwich township, Sussex county, New Jersey—the west end in the borough of Easton, in the county of Northampton, and state of Pennsylvania.

11. Capital stock. Twenty-five thousand dollars, with power to increase the same to an extent sufficient to accomplish the work.

12. Price and number of shares. Two hundred and fifty shares, at one hundred dollars each. The company was incorporated in 1795, but little done to any effect till 1803.

13. Private subscriptions. The accounts of the company were so imperfectly kept antecedent to the year 1803, that it would require more time than the occasion admits, to answer this question with tolerable accuracy. Few of the early subscriptions were paid *in full*—many shares were forfeited for this reason. In or about 1806, the capital settled down to two hundred and ninety-seven

shares, of one hundred dollars each, a considerable proportion of which has been drawn as prizes in the lotteries authorised by law for the benefit of the funds of the company.

14. State subscription. Nothing—but in 1806, the state lent ten thousand dollars to the company, payable in ten annual instalments with interest. This debt was extinguished by payment of principal and interest in December, 1811, the tolls of the bridge having been appropriated to the discharge of this debt, to the exclusion of dividends, until the debt was paid.

15. Rates of toll. The rates are the same for pleasure carriages and carriages of burden, being regulated only by the number of wheels and horses. The rates here annexed are lower than the rates authorized by law. A loaded wagon and four horses, 62½ cents; a pleasure carriage with two horses and four wheels, 37½ cents, of two wheels, 30 cents; a single man and horse, seven cents; a drove of cattle per head, 4 cents, with deduction for large droves, proportioned to the number of cattle in them.

16. Number of managers. Seven, including the president, which number has proved, on experience, to be quite suitable to the convenient administration of its affairs. It is believed that no other number would be equally efficacious.

17. Where place of business, and who president. John Hies-ter, Esq. of Easton, is the present president. The business of the company is, and always has been, conducted at Easton.

18. Average tolls, since authorized to be collected. 4,530 dollars. This is the average of tolls since October 1806, to October 1821, say for fifteen years.—*See note A.*

19. Average tolls, for three years. 4,659 dollars.—*See note A.*

20. Annual dividend, since completed. Dividends were not declared until October, 1812, for the reason assigned in the answer to question 14. The average of dividends for nine years from October, 1812, to October, 1821, is fourteen per cent. per annum, or seven per cent. semi-annually.—*See note B.*

21. Annual dividend for three years. 11-68 per annum, or 5-84 semi-annually. *See note B.*

NOTE A.—*In explanation of questions 18 and 19.* These results might, without explanation, lead to incorrect conclusions, as they seem to indicate a progressive increase in the annual amount of tolls. The fact is otherwise; the tolls for the last seven years having suffered a gradual diminution. In 1807 and 1808, the tolls did not amount to \$2500 a year; from that time to 1814, inclusive, they regularly increased, and in the latter year were up as high as \$6,600. But since 1814, they have been as regularly diminishing in amount, till, in 1821, they were as low as \$4,270.

NOTE B.—*In explanation of questions 20, and 21.* It will be observed that these dividends have, of course, been declared on the nominal amount of capital stock, to say, \$29,700. But this

23. **Debts.** The company owes nothing. It has a large and accumulating "Growing Fund," and is insured against fire, by a perpetual insurance, to the amount of 40,000 dollars.

23 **Market price of stock.** The aggregate amount of stock is so small that it can scarcely be called an article in market. The whole is owned by about seventy or eighty stockholders, and very few transfers are made. The price has varied according to the times, from 150 to 160 per cent. and occasionally more. This refers to prices since the company has made dividends.

amount gives no idea of the actual cost of the bridge, and can therefore furnish no ground of calculation or comparison between cost and income. What the actual cost of the bridge has been, it is impracticable at this day to ascertain with any precision, owing, as has been before intimated, to the very imperfect condition of the accounts previous to 1803. But considerable aid to the funds was derived from the lotteries authorised for their benefit: and the whole sum borrowed from the state, to say, \$10,000, which, with its accruing interest, was repaid out of the tolls, should be included in the actual capital expended, and would have been so charged, but that the stockholders preferred to sink it by an appropriation of the tolls to that purpose. The best conjectural estimate that can now be made of the cost, would give fifty thousand dollars, at the least, for its amount.

In the first half year of 1814, the company divided eleven per cent.—the last semi-annual dividend was only five per cent. One per cent. on the capital is added every half year to the "Growing Fund," established in conformity with the act incorporating the company, for the purpose of repair, and eventually of the reconstruction of the timber part of the bridge. This fund is now rapidly accumulating, and as it is never touched for current repairs, which are defrayed out of the tolls before striking a dividend, it is expected it will ultimately be sufficient for the purpose to which it is destined.

It is believed that, in ordinary times, the dividends will be kept up to the average rate of six per cent. for the half year. The produce of this dividend, applied to a capital of 50,000 dollars, would still give about seven per cent. per annum; which affords ample encouragement to prudent enterprise of this description, and greatly exceeds any calculation previously formed. The effect of the bridge, on the intercourse between the opposite shores of the Delaware, was instantaneous. The rates of toll were, in all the details, reduced below the antecedent rates of ferriage, yet the produce of the first year of the bridge nearly doubled the most exaggerated estimate of the previous product of the ferries.

The extraordinary increase of the tolls in 1814 and 1815, and the corresponding depression in 1820 and 1821, will readily be accounted for, by those who were observers of the times.

Company for erecting a Bridge over the river Delaware at the Columbia Glass Works.

1. Dimensions. Length 720 feet, breath 30 feet.
2. Number of piers and arches. Four piers and five arches.
3. Materials of piers. Wood, under water; stone laid in lime and sand, above water.
4. Elevation of floor. Twenty-eight feet above the usual level of the water.
9. Commencement and completion. Commenced in 1817. Not completed.
10. Where situated. The west end in the county of Northampton, Pennsylvania, the east end in the county of Sussex, New Jersey, eighteen miles above Easton, Pennsylvania.
11. Capital stock. To be incorporated when 15,000 dollars shall have been subscribed.
12. Price and number of shares. Fifty dollars per share, 302 shares subscribed when the patent was issued.
13. Private subscriptions. 17,300 dollars subscribed by individuals, and expected to have been paid. \$6,942 76 have been paid, on a demand for \$10,380: the remaining \$3,437 24 will not be easily collected, and about \$6,000 are considered as lost.
14. State subscription. Not any thing. Application has been made to the states of New-Jersey and Pennsylvania, respectively, but without success.
16. Number of managers. A president and six managers. The number not considered too great.
17. Where place of business, and who president. A part of the time in the village of Columbia, New-Jersey, and part at Henry Dill's, Pennsylvania. The president resides in Smithfield township, Northampton county, Pennsylvania.
22. Debts. Supposed to be about one thousand dollars.
23. Market price of stock. No sale.

Company for erecting a Bridge over the Lehigh, at Northampton.

1. Dimensions. Five hundred and thirty feet in length, and thirty-two feet in breadth.
2. Number of piers and arches. Three piers, and supported by four iron chains, full one and a fourth inch in thickness. They are sixty-six feet in length and twenty-three feet in breadth.

3. Materials of piers. The best of limestone, laid in lime and sand.
4. Elevation of floor. Twenty-two feet three inches, above the usual level of the water.
5. Painted. It is, in part.
6. Roof. It is roofed and weatherboarded.
7. Footways. There is one of four feet wide, in the centre, There is a carriage way on each side.
8. Cattle permitted to pass. The number not limited, and it is believed that any number that can get footing on it at one time, might do so without injury to the bridge.
9. Commencement and completion. Commenced 9th May, 1814, and was passable by wagons on the 19th September following.
10. Where situated. In Lehigh county, half a mile from the borough of Northampton.
11. Capital stock. Fifteen thousand dollars.
12. Price and number of shares. Fifty dollars each, three hundred shares.
13. Private subscriptions. Fifteen thousand dollars.
14. State subscription. Nothing.
15. Rate of tolls. A loaded wagon with four wheels and four horses, 37½ cents; a pleasure carriage four wheels and two horses, 33 cents; a single man and horse, 6½ cents; a drove of cattle per head, four cents.
16. Number of managers. Four; it is believed two would be more suitable.
17. Where place of business, and who president. At Northampton. The president resides at the Lehigh bridge.
18. Average tolls, since authorized to be collected.

From August 19, 1814, to August 1815.	\$1,861 29
1815, to 1816	1,910 81
1816, to 1817	1,831 11
1817, to 1818	1,911 11½
1818, to 1819	1,328 49
1819, to 1820	1,225 40
1820, to 1821	1,185 51½
19. Average tolls for three years. About one thousand two hundred and thirty-three dollars.
20. Annual dividend, since completed. None made, as yet.

22. **Debts.** On the first Monday in August last, there was due to the president, including compensation for his services, \$1,672 91. It has, however, since that period, been growing less.

23. **Market price of stock.** There have been no sales for eighteen months past.

Company for erecting a Bridge over the Monongahela, at Pittsburg.

1. **Dimensions.** The superstructure is fifteen hundred feet from face to face of the abutments; in breadth thirty-seven feet.

2. **Number of piers and arches.** Seven piers and eight arches.

3. **Materials of piers.** The abutments and piers are of stone and of hammer-dressed range-work. The heads of piers are covered or capped with iron, riveted and bolted together, so as to form one compact sheet and closely fitted to the head of the pier. The tops of the piers are capped with cut stone.

4. **Elevation of floor.** (No answer.)

5. **Painted.** Yes.

6. **Roof.** It is roofed with jointed white pine shingles.

7. **Footways.** There is a footway on each side, each four and a half feet wide, inclosed within the weatherboarding, and raised a little above and separated from the carriage ways.

8. **Cattle permitted to pass.** A bye-law limits the number to ten, but many more have passed at one time.

9. **Commencement and completion.** Commenced in 1816, passed on it in 1818, and completely finished in 1821.

10. **Where situated.** In Allegheny county, at the city of Pittsburg.

11. **Capital stock.** One hundred thousand dollars.

12. **Price and number of shares.** Each share twenty-five dollars and four thousand shares.

13. **Private subscriptions.** \$57,450, subscribed by individuals, all of which has been paid.

14. **State subscription.** Forty thousand dollars.

15. **Rates of toll.** A loaded wagon and four horses, twenty-five cents; a pleasure carriage with two horses, thirty-seven and a half cents; a single man and horse, six cents; a drove of cattle per head, one and a half cents.

16. **Number of managers.** Twelve managers. Not too great, as they charge nothing for their services.

17. **Where place of business, and who president.** The business is conducted at Pittsburg, in a building erected at the end of the

bridge, which most conveniently serves for a toll house, the residence of the gate-keeper, and a room for the managers. William Wilkins is the president, Pittsburg.

18. Average tolls, since authorised to be collected. Five thousand dollars.

19. Average tolls, for three years. Four thousand dollars.

20. Annual dividend, since completed. None: the receipts are applied to pay off the balance due for building the bridge.

21. Annual dividend, for three years. None.

22. Debts. About five thousand dollars.

23. Market price of stock. No sales.

The following is a general statement of the business of the company, to the present time.

Cash received of stockholders	-	-	-	\$ 97,450
Tolls	-	-	-	16,100
Interest	-	-	-	450
				<hr/> \$114,100
Contract for building the bridge	-	\$ 110,000		
Remaining unpaid	-	3,800		
			106,200	
Pavements, toll house, and all incidental expenses from the commencement		7,500		
				<hr/>
Amount paid	-	-	-	\$113,700
Cash on hand	-	-	-	300
				<hr/>
Debts due on original contract	\$ 3,800			
Other demands, may be	- 2,200			
				<hr/>
				\$ 6,000
				<hr/>

Company for erecting a Bridge over the Schuylkill, at Philadelphia.

1. Dimensions. Length five hundred and fifty feet; abutments and wings, seven hundred and fifty feet; total length thirteen hundred feet. Entire width forty two feet.

2. Number of piers and arches. Two piers and three arches, the centre arch one hundred and ninety-four feet two inches span: the two smaller ones, one hundred and fifty span each.

3. Materials of piers. The piers and arches are composed of stone, the superstructure of wood. The latter is covered with a roof, and the sides of the elevation boarded in a handsome style. It exhibits the first covered superstructure in America, and the

second in the world. A particular account of the erection may be seen in the first volume of the Philadelphia Agricultural Memoirs.

4. Elevation of floor. In the greatest elevation, thirty-one feet above the general level of the water.

5. Painted. It is painted.

6. Roof. See answer to third query.

7. Footways. There is a footway on each side.

8. Cattle permitted to pass. Twenty head at one time.

9. Commencement and completion. It was commenced 5th September, 1801, and completed 1st January, 1805.

10. Where situated. The eastern abutment and wingwalls are within the bounds of the city, the western in the county of Philadelphia.

11. Capital stock. One hundred and fifty thousand dollars, with a proviso in the charter authorising the company to raise additional funds, if found expedient for the completion of the bridge.

12. Price and number of shares. Fifteen thousand shares, at ten dollars each.

13. Private subscriptions. The moneys paid by individuals will be seen by the amount of actual shares. The residue of the cost, to wit, about 300,000 dollars, discharged by applying the tolls of the former floating bridge, and withholding from dividends those of the present structure, until all the debts and expenses were paid.

14. State subscription. Nothing.

15. Rate of tolls. For a loaded wagon and four horses, 17 cents; a pleasure carriage and two horses 12 cents; a single man and horse, two cents; a drove of cattle per head, one cent.

16. Number of managers. A president and twelve managers or directors, which number is not found to be too great.

17. Where place of business; and who president. At Philadelphia. The president is the honorable Richard Peters, who has held that station since the commencement of the undertaking, and resides at Belmont near the city.

18. Average tolls, since authorized to be collected. The average amount of tolls received since 1st January, 1805, is \$15,298 per annum.

19. Average tolls for three years. \$14,813 per annum.

20. Annual dividend, since completed. In the seventeen years since the completion of the bridge, twenty semi-annual dividends only have been declared, amounting in the aggregate to \$116,411 75

or three and a half per cent. per annum: this dividend being made on \$195,650, instead of \$300,000, the actual cost of the structure. The difference having been sunk by the appropriation of tolls, &c. for several years, say seven years, to that object, instead of dividing them among the stockholders, as explained in answer to question No. 13.

21. Annual dividend, for three years. For the last three years, the dividends average six and one-sixth per cent. per annum: the apparent discrepancy between which and the previous dividends, arises from the circumstance of the suspension of dividends for several years, as explained in the last answer; and the dividends already declared being divided between the whole number of years that have elapsed, since the completion of the bridge, say seventeen years.

22. Debts. The heavy debt incurred by the company in the completion of the bridge, has, long since, been liquidated in the manner explained above. The company is now clear of debt, and moreover possesses a considerable contingent fund, created in a similar manner.

23. Market price of stock. The stock will now command one hundred and twenty to one hundred and twenty-five per cent. in the market.

Company for erecting a Bridge over the Schuylkill at the upper ferry, Philadelphia.

1. Dimensions. The length on the floor of the bridge is three hundred and forty-eight feet from abutment to abutment: in a straight line, measured on the ice, three hundred and thirty-four feet.

2. Number of piers and arches. It has no piers, being a single arch.

3. Materials of piers. No piers, the abutments are of stone.

4. Elevation of floor. In the centre of the bridge it is thirty-five feet; the width of the bridge in the centre is thirty-five feet four inches; width at the ends is fifty-four feet six inches.

5. Painted. It is painted on the outside.

6. Roof. It has a roof of shingles.

7. Footways. It has a footway on each side.

8. Cattle permitted to pass. From forty to fifty head.

9. Commencement and completion. Commenced in 1811, and completed in 1812.

10. Where situated. Blockley and Penn townships, near Philadelphia.

11. Capital stock. \$80,200.

12. Price and number of shares. Original price was fifty dollars each share, and 1,604 shares.

13. Private subscriptions. \$80,200.

14. State subscription. Nothing.

15. Rate of tolls. A loaded wagon and four horses, with country produce, twelve and a half cents; with foreign produce, seventeen cents; ditto two horses, and country produce, nine cents; do. foreign produce, twelve cents. A pleasure wagon or carriage with four horses, twenty cents; ditto with two horses, twelve cents; do. with one horse, nine cents. A gig and one horse, six cents; a single man and horse, two cents; a drove of cattle per head, one cent; hogs and sheep, one half cent.

16. Number of managers. Six managers, one president, and one treasurer: the number is not too great.

17. Where place of business, and who president. At Philadelphia, Jacob Ridgeway, at Philadelphia.

18. Average tolls, since authorised to be collected. Total amount of tolls received from January, 1814, to January, 1822, is \$22,920 57; average, is \$2,865 07 per annum.

19. Average tolls, for three years. Tolls received in 1819, 1820, and 1821, amount to \$9,372 88, average \$3,124 29, per annum.

20. Annual dividend, since completed. None.

21. Annual dividend, for three years. None.

22. Debts. About \$43,826, including expenses of re-roofing the bridge, which amount has not been brought into the company's account yet.

23. Market price of stock. Nominal, as there is no sales made unless in trade or barter.

Company for erecting a Bridge over the Schuylkill, at the falls.

1. Dimensions. Length 316 feet, exclusive of the width of two piers, which is 21 and 15; breadth of original bridge, 18 feet.

2. Number of piers and arches. Two piers and three arches.

3. Materials of piers. Stone.

4. Elevation of floor. Twenty-four feet three inches before the water was raised six feet by the Fairmount dam.

5. Painted. No.

6. Roof. It has.

7. Footways. None.

8. Cattle permitted to pass. Twenty at one time, whilst a chain bridge; same regulation yet exists, but has not of late been deemed so necessary.

9. Commencement and completion. Built 1808, re-built (on the plan of New Hope) on wooden arches in 1817.

10. Where situated. Philadelphia county, near Philadelphia.

11. Capital stock. No specific amount limited.

12. Price and number of shares. Fifty dollars per share, 332 shares; an increase of ten dollars a share was called for and further subscriptions made to rebuild the bridge.

13. Private subscriptions. On the first subscription \$19,040; on the second \$12,250; the whole of the tolls have also been applied to pay the debts of the company, so that nearly forty thousand dollars have been expended.

14. State subscription. None.

15. Rate of tolls, for

A loaded wagon and four horses	19 cents,
A pleasure carriage and two horses	15
A single man and horse	3
A drove of cattle per head	1½

16. Number of managers. One president and four directors, the number not too great.

17. Where place of business, and who president. Usually at the falls of Schuylkill, near to which Peter Robeson, Esq. the present president resides.

18. Average tolls, since authorized to be collected. The bridge fell twice after it was first built, and considerable lapse of time without collecting any tolls—cannot be answered.

19. Average tolls for three years. Eight hundred and forty dollars.

20. Annual dividend since completed. Nothing.

21. Annual dividend for three years. Nothing.

22. Debts. One thousand six hundred and fifty dollars.

23. Market price of stock. Nothing.

Company for erecting a Bridge over the river Schuylkill, at the Flat Rock.

1. Dimensions. 187 feet 6 inches long, 21 feet wide in the clear.

2. Number of piers and arches. One arch and no piers.

3. Materials of piers. Abutments of stone.

W

4. Elevation of the floor. Twenty-three feet at the heel of the arch, and rises thirteen feet ten inches in the arch.

5. Painted. No.

6. Roof. It has.

7. Footways. None.

8. Cattle permitted to pass. Not determined.

9. Commencement and completion. Commenced 1810, roofed and weatherboarded in 1815, with money arising from the toll.

10. Where situated. West end in Montgomery county and the east end in Philadelphia county, eight miles from Philadelphia and four from Germantown.

11. Capital stock. Ten thousand dollars.

12. Price and number of shares. Fifty dollars per share; number of shares sold, 203.

13. Private subscriptions. 203 shares subscribed, and ten thousand one hundred and fifty dollars paid by individuals.

14. State subscription. Nothing.

15. Rate of tolls.

A loaded wagon and four horses	17 cents.
A pleasure carriage and two horses	12
A single man and horse	2
A drove of cattle per head	$\frac{1}{2}$

16. Number of managers. One president and six managers. The number is not too great.

17. Where place of business and who president. At the house of H. Grow, at the bridge, (in Montgomery) Loyd Jones president, resides in Lower Merion township, Montgomery county.

18. Average tolls, since authorised to be collected. About two hundred and thirty dollars per annum.

19. Average tolls, for three years. About three hundred and ten dollars.

20. Annual dividend since completed. None.

21. Annual dividend, for three years. None.

22. Debts. None.

23. Market price of stock. No sales at present.

**Company for erecting a Bridge over the Schuylkill,
at Pottstown.**

1. Dimensions. 340 feet in length, and 28 feet in breadth.
2. Number of piers and arches. One pier and two arches.
3. Materials of piers. Of stone.
4. Elevation of floor. Eighteen feet.
5. Painted. On both sides.
6. Roof. It has, but not painted.
7. Footways. None; but divided into two carriage ways.
8. Cattle permitted to pass at a time. Six.
9. Commencement and completion. Commenced in 1820, and completed in 1821.
10. Where situated. The north end adjoining the borough of Pottstown, in Montgomery county; the south is in Chester county.
11. Capital stock. Four hundred shares.
12. Price and number of shares. Fifty dollars per share, and 217 subscribed exclusive of the state's subscription.
13. Private subscriptions. About seven thousand dollars have been received on account of the 217 shares subscribed; residue uncertain.
14. State subscription. Sixty shares.
15. Rate of tolls:

A loaded wagon and four horses	20 cents
A pleasure carriage with two horses } having four wheels	20
A single man and horse	4
A drove of cattle per head	1
16. Number of managers. A president and six managers: number not considered too great.
17. Where place of business, and who president. In the borough of Pottstown. Joseph Potts, residing in the borough.
18. Average tolls, since authorised to be collected. The bridge was only completed in October last.
19. Average tolls for three years. Answered by answer to question 18.
20. Annual dividend, since completed. Ditto.
21. Annual dividend, for three years. do.
22. Debts. Not yet ascertained.
23. Market price of stock. Uncertain. •

Company for erecting a Bridge over the river Susquehanna, at M'Call's ferry.

1. Dimensions. About 600 feet was the length thereof.
2. Number of piers and arches. One pier and two arches.
3. Materials of piers. Stone.
4. Elevation of floor. About fifty feet.
5. Painted. No.
6. Roof. It was roofed and weatherboarded.
7. Footways. None.
8. Cattle permitted to pass at one time. The number was not limited.
9. Commencement and completion. Commenced September, 1812; completed December, 1817, and destroyed March 3d, 1818, by ice.
10. Where situated. One end in Lancaster county, and the other in York county.
11. Capital stock. See act of incorporation.
12. Price and number of shares. One hundred dollars price of a share.
13. Private subscriptions. About \$29,500 by individuals and by the state \$20,000
14. State subscription. \$20,000.
15. Rate of tolls. A loaded wagon and four horses; a pleasure carriage with two horses; a single man and horse; a drove of cattle per head. See the act of incorporation.
16. Number of managers. Ditto.
17. Where place of business and who president. The business was conducted at M'Call's ferry and at West Chester, occasionally. President J. Preston, Philadelphia, was the last. There has been no election since the destruction of the bridge.
18. Average tolls, since authorised to be collected. Some tolls were collected.
19. Average tolls for three years. Nothing.
20. Annual dividend, since completed. None.
21. Annual dividend, for three years. None.
22. Debts. They exceed six thousand dollars.
23. Market price of stock. Nothing.

This beautiful bridge, built by Theodore Burr, and allowed to be the finest piece of architecture of the kind in America, if not in the world, was demolished on the third of March, 1818, at the breaking up of the ice. The river rose to an unprecedented height; cakes of ice passed over the top of the roof, till at length the whole bridge was raised off its bearing several feet perpendicular, and thus carried down and destroyed. In this narrow part of the river the ice, it is said, was lifted nearly eighty feet above the common level.

The preceding answers I believe to be nearly correct, though not perfectly accurate as relates to sums—the books of the company are in possession of Dr. Bailey, of Chester county, who was the treasurer, and who can give a more perfect statement if required.

Company for erecting a Bridge over the river Susquehanna, at Columbia.

1. Dimensions. Breadth 30 feet, length 5,690 feet.
2. Number of piers and arches. Fifty-three.
3. Materials of piers. Stone.
4. Elevation of floor. Twenty-three feet.
5. Painted. No.
6. Roof. Yes.
7. Footways. None.
8. Cattle permitted to pass at one time. Forty or fifty.
9. Commencement and completion. Commenced 1812, completed 1814.
10. Where situated. Lancaster and York counties; east end at or near Columbia, west end Wrightsville.
11. Capital stock. Four hundred thousand dollars.
12. Price and number of shares. \$100—\$419,400.
13. Private subscriptions. Four hundred and nineteen thousand four hundred dollars.
14. State subscription. Nine hundred shares, ninety thousand dollars.
15. Rate of tolls.

A loaded wagon and four horses	\$1 00
A pleasure carriage and two horses	75
A single man and horse	25
A drove of cattle per head	3
16. Number of managers. Thirteen.

17. Where place of business, and who president. Columbia, Christian Haldeman president, resides in the same place.

18. Average tolls, since authorised to be collected. Ten thousand six hundred and eighty-two dollars eighty-eight cents.

19. Average tolls for three years. Eight thousand two hundred and thirty-two dollars thirty-nine cents.

20. Annual dividend since completed. Five and a half per cent.

21. Annual dividend for three years. None.

22. Debts. Notes in circulation. Four thousand one hundred and seventy-two dollars twenty-five cents

23. Market price of stock. No sales.

Company for erecting a Bridge over the river Susquehanna, at Harrisburg.

1. Dimensions. The length is 2,876 feet, and breath 40 feet.

2. Number of piers and arches. Four abutments, ten piers and twelve arches.

3. Materials of piers. Stone, wood and iron.

4. Elevation of floor. Fifty feet.

5. Painted. yes.

6. Roof. yes.

7. Footways. Yes.

8. Cattle permitted to pass at one time. From fifteen to thirty head according to size.

9. Commencement and completion. [Commenced 1812, completed 1817.

10. Where situated. In Dauphin and Cumberland counties; the east end rests on the borough of Harrisburg, in Dauphin county, and the west end on the county of Cumberland.

11. Capital stock. Four hundred thousand dollars.

12. Price and number of shares. The original price twenty dollars, and number 20,000.

13. Private subscriptions. Paid by individuals about sixty-five thousand dollars and much more expected.

14. State subscription. Ninety thousand dollars.

15 Rate of tolls.

A loaded wagon and four horses	\$1 00
A pleasure carriage and two horses	62½
A single man and horse	25
A drove of cattle per head	6¢

16. Number of managers. A president, 12 directors, one treasurer and secretary: not too many.

17. Where place of business, and who president. The business of the company is done at Harrisburg. Thomas Elder is president, and resides at the same place.

18. Average tolls, since authorised to be collected. Average tolls for five years, \$14,336 48.

19. Average tolls for three years. \$12,736 79.

20. Annual dividend since completed. Seven and eight per cent. per annum.

21. Annual dividend, for three years. Same as above.

22. Debts. The company owes no debts.

23. Market price of stock. Generally at par.

Company for erecting a Bridge over the North East branch of the river Susquehanna, at the town of Northumberland.

1, 2. Dimensions and number of piers and arches. The bridge at Northumberland over the North East Branch of the Susquehanna, may be said to consist of two bridges (like the bridge at Harrisburg.) It is built on the North East Branch of the river Susquehanna, opposite Shamokin island; it commences, on the west side of the town of Northumberland and is carried from thence to Shamokin island; having two abutments, three piers and four arches. The deck of this part of the bridge is in length 848 feet 6 inches. The bridge commencing on the east side of Shamokin island, is carried to the east bank, or the Sunbury side of the river. It has also two abutments, three piers and four arches, and is in length 976 feet 6 inches. Total length of the frame work of the bridge 1,825. The length of the abutment and wing walls on the north side is 206 feet 9 inches; the length of the abutment and wing walls on Shamokin island, (west side) 133 feet 3 inches; the length of the abutment and wing walls on Shamokin island (east side) 82 feet; the length of the abutment and wing walls on the east side of the river (Sunbury side) 78 feet; making the length of the four abutments and wing walls 500. In addition to the above there is a road on Shamokin island, which was made and is kept in repair by the Northumberland Bridge Company: its length from bridge to bridge is 106 perches; the breadth of the bridge is 32 feet.

5. Materials of piers. The abutments, piers and inclined planes are composed of stone, and the inclined planes are covered with five inch oak plank, well secured with iron spikes—these inclined planes are the only security for the safety of the bridge, at the time that the ice is running, and therefore it is necessary that they should be always kept in the most substantial repair.

4. Elevation of floor. The elevation of the floor (or deck) of the bridge above the level of low water mark, is 41 feet; the distance of the arches from low water mark is 19 feet.

5. Painted. The bridge is painted on the outside, not the roof.

6. Roof. It has a roof of short white pine shingles.

7. There is one foot-way only, which is in the centre of the bridge, and raised above the carriage way about four feet: there is a carriage way on each side, each 11 feet 6 inches wide, and 11 feet 4 inches high, clear of the floor.

8. Cattle permitted to pass. Not more than twenty head of cattle are permitted to cross the bridge at the same time; it is probable that the bridge might bear a greater weight, but the board were of opinion, when they made the bye law, that it was not necessary to risk the property of the stockholders, by making the experiment of what might be the greatest weight the arches would bear.

9. Commencement and completion. The foundation stone of this bridge was laid at the abutment in Northumberland town; on the 4th day of June, 1812, and it was so far completed, as to enable the company to commence taking toll on the 21st day of November, 1814. The bridge however could not be said to be completed until 1816; our bridge builder, Mr. Theodore Burr, having deserted the work, leaving our business to attend to contracts which he had subsequently made, we were under the necessity of finishing the work to save the bridge from perishing, by hiring hands ourselves.

10. Where situated. The bridge is altogether in Northumberland county, and commences in the town of Northumberland, as before mentioned, and ends on the eastern side of the river, about one mile above the town of Sunbury.

11. Capital stock. The capital stock of the company was authorised by law at 80,000 dollars; an addition was afterwards legally made of 10,000 dollars, making a capital of 90,000 dollars.

12, 13, 14. Price and number of shares &c. The original price of shares was twenty-five dollars, and there are 3,600 shares, of which the state holds 2,000 shares or 50,000 dollars, and individuals 1,600 shares or 40,000 dollars. From the amount subscribed by individuals there has been a defalcation of about 2,400 dollars, a part of which was put up to sale according to law, bought in and added to the surplus fund, as will be perceived by an extract of a

letter, hereto annexed, to Nathaniel B. Boileau, Esq. then secretary of the commonwealth, dated 31st January, 1817, marked A.

15. Rate of tolls. The printed paper annexed, marked B. contains the list of tolls now demanded, and which are in no instance so high as was paid at the ferry before the bridge was built.

16. Number of managers. The affairs of the company are conducted by a president, six managers and one treasurer: their number is not too great.

17. Where place of business, and who president. The business of the company is conducted in the town of Northumberland, John Philip De Gruchy, is the president; he resides in the said town.

18, 19. Average tolls, since authorised to be collected, &c. The annexed account marked C of tolls received at the bridge annually from their commencement, will shew what a serious falling off there is in the receipts, between the year 1817 (the best year since toll was taken) to 1821 (the worst): the deficiency for the same period, of time, one year, it will be observed, is no less than \$1,977 20.

20. Annual dividend since completed. There have been two annual dividends made since the bridge was completed, viz. in the months of November, in the year 1815 and 1816, of three per cent. on the capital of \$90,000. The property due to the state (one thousand five hundred dollars per annum) was regularly remitted. From that time no dividend has been made, for reasons given in an annual communication to the respective governors for the information of the legislature, and which reasons, as those communications may not be immediately at hand, it is thought right to repeat here for the information of the committee of the senate, more especially as the commonwealth has so considerable an interest in the bridge.

Mr. Theodore Burr, who was the contractor for building the Northumberland bridge, which was the first intended to be built over the Susquehanna, after making the contract with its managers, made very shortly after, a contract with the managers of the Harrisburg bridge; with the managers of the bridge at M'Calls ferry; and as if those had not been more than sufficient to give employment to an active and ambitious mind, he made a fourth contract, for building the bridge thirty miles above us, at Berwick. Often since, have the managers of the Northumberland bridge lamented that they had not caused a clause to be inserted in their contract with Mr. Burr, that he should not enter into contract, or rather begin any other bridge, until the one here was completed. That condition was, unfortunately, not required: the managers never suspected that the man would have been so imprudent as to take on himself more work than he could attend to. They have, it is true, in consequence, suffered from their confidence in him, although they hope and are confident that the stockhol-

ders will ultimately be no losers. The managers, as in all cases of this kind, were obliged to make advances to the bridge builder for the purpose of enabling him to purchase timber and other materials: instead of appropriating, latterly, the money so advanced to the use of our bridge, it was applied by Mr. Burr to other purposes; and the board found themselves under the necessity to advance extra sums in order to finish the bridge, to prevent its decaying for want of being roofed and weatherboarded, &c. For this purpose they took as a collateral security for such advances, the 400 shares of stock by the said T. Burr, which had cost him \$10,000. The advances being thus made, the board had subsequently to repay the money, which they borrowed for the purpose, out of the receipts of toll. The committee will observe by the annexed list of tolls, that the receipts have been reduced between the receipts for one year, ending December 1821 and for the same term in 1817, nearly two thousand dollars and this constant reduction in the annual receipts since 1817, is the reason that they have not been able to declare a dividend since November 1816. It will be perceived that the stockholders will ultimately not be losers by this delay, as the stock of Theodore Burr, ten thousand dollars, reverts to the company and it is intended whenever there are funds, to enable the managers to commence again making dividends, that the dividend shall be declared on a capital of \$80,000 instead of \$90,000.

From the time the company were obliged to appropriate the money arising from the tolls to the discharge of debts, they have annually sent copies of their accounts to the governor, for the information of the legislature, which, although not required by law, they felt it a duty incumbent on them to shew the precise situation of the affairs of the company: by referring to those communications it will be perceived that the unexpected reduction of the tolls, which have fallen off from year to year, since 1817, has set at defiance any certain calculation how soon the company would again be enabled to commence making dividends. They can now, with satisfaction, inform the committee that the whole amount of debt to be paid out of the receipts of toll is about eight hundred dollars; after the discharge of which, should no particular accident happen to the bridge, the money received for toll will be, from time to time, divided among the stockholders, as heretofore.

The board commenced, at an early day, a surplus fund account, in order to be prepared in case of accidents to the bridge. The company hold, as will be seen by former communications, \$789 79 in the United States six per cent. stock, besides thirty-nine shares of their own stock, forfeited to the company and bought in from defaulters. There is yet due by defaulters \$1,089, the shares for which will ultimately be forfeited to the company, and will be purchased according to law for account of the stockholders, and the income from which will form an item to the credit of the surplus fund account. As soon as the company is out of debt, it is

intended to increase this fund by a strict appropriation of its own income towards its capital, and by appropriating also, annually, what fractional sum may remain after declaring an annual dividend.

A bridge built over rapid streams and subject to the pressure of very heavy ice on the breaking up of the rivers in the spring, is the most dangerous property that can be held: it is ever subject to accidents which cannot be foreseen, prevented or controlled, for with all the care and precaution that can be taken, by the most active and attentive superintendence, accidents to bridges have, may, and will happen, and it therefore has been a favorite maxim of the managers of this bridge, that it is for the interest of its stockholders that a fund should be provided as speedily as possible, to be held in reserve and ready to be made use of in case of any unexpected and unfortunate event to the bridge, or any part of it. It is hoped that the committee of the senate, as well as the legislature, will think well of the measure.

It will be perceived that the board of managers of the bridge have taken full advantage of the indulgence given them by Condé Raguet, Esq. the chairman of the committee of senate. They have seized with satisfaction and pleasure, the opportunity of placing before the committee under one view, the general concerns and state of the funds of the Northumberland Bridge Company, instead of referring to detached accounts sent annually to the governor from the time the board ceased declaring a dividend.

The board of managers must yet ask the indulgence of the committee to permit them to repeat what has been heretofore urged in letters to the governor. In a letter to Governor Hiester, dated 20th January, 1821, from the president of this board, it is stated, (in giving a reason for the decrease of the tolls) as follows:

"We are, in some measure, to account for this deficiency from the great decrease of trade and travelling, but more especially to the lowness of the waters for the past two years, which has enabled the few who do travel, to pass for many months under the bridge by fording the river, instead of passing on it and paying the toll; an evil which the stockholders in this and similar institutions in this state are obliged to submit to, while in the state of New York, those who embark their property in these laudable improvements, are protected by acts of assembly preventing fording of the rivers, and giving to the respective companies, a jurisdiction, in some cases, of three miles above, and three miles below the bridges.—The board, emboldened by the permission given them in the before mentioned letter of the chairman of the committee of senate, take the liberty to observe that they hope the time is fast approaching when the legislature of Pennsylvania, satisfied of the great advantages of bridges to the commerce of the state, and in order to support the interest of individuals who have embarked and risked their property in building bridges, will follow the example of her sister state of New York, by giving similar protection to the bridges.

on our own waters. Not, may it please the committee, that this board wish the fording to be stopped; but to oblige all those who prefer the fording when the river is sufficiently low, or when it is frozen over, to pay the toll of a bridge built expressly for their advantage and convenience, and which they are truly glad to make use of when the waters are high or when the ice is running. Without this protection to the stockholders, bridges built where at times the waters are low, or perhaps frozen over for two months, will never be a productive stock, although the stockholders may be entitled by law, as we are, to raise the toll until it pays on the capital an interest of eight per cent! We conceive, for the general advantage of the community, our present tolls are sufficiently high, although they are considerably lower than were formerly paid at the ferry.

The board beg pardon for this digression—happy will they think themselves if the committee of senate should enter into their views, and advise that all the bridges in the state subject, like the Northumberland bridge, to a shallow river at some part of the season, may receive a similar protection to that granted by the state of New-York to some of its bridges.

Most sincerely wishing the honorable committee every success in the great and laudable business which at present calls their attention, and in full expectation that much public good will be derived from their laborious and patriotic exertions, and without taking up more of their time, the board of managers of the bridge over the Susquehanna at Northumberland, will conclude by replying briefly to the three remaining questions.

21. Annual dividend for three years. This question is answered by the foregoing observations on the 20th question.

22. Debts. This is answered also by the observations on the 20th question.

23. Market price of stock. We reside in the "back country," and have not, like the great cities, "market prices" for stock, nor can any certain price be quoted for the Northumberland bridge stock.

Company for erecting a Bridge over the river Susquehanna, at Lewisburg.

1. Dimensions. One thousand one hundred and twenty feet in length and thirty feet wide.

2. Number of piers and arches. Four piers and five arches.

3. Materials of piers. Stone.

4. Elevation of floor. Twenty-five feet.

5. Painted. Yes.
6. Roof. Yes.
7. Footways. None; but two cartways.
8. Cattle permitted to pass at one time. Twenty-five.
9. Commencement and completion. Commenced 25th July, 1816, and completed in 1818.
10. Where situated. West end in Lewisburg, Union county, east end in Northumberland county.
11. Capital stock. Fifty, thousand dollars.
12. Price and number of shares. One thousand two hundred shares, at fifty dollars each.
13. Private subscriptions. Eight hundred shares.
14. State subscription. Four hundred shares.
15. Rate of tolls.

A loaded wagon and four horses	75 cents
A pleasure carriage and two horses	30
A single man and horse	12½
A drove of cattle per head	6
16. Number of managers. Six.
17. Where place of business, and who president. Lewisburg, George Kremer, president.
18. Average tolls, since authorised to be collected. One thousand two hundred dollars.
19. Average tolls for three years.
20. Annual dividend since completed. None made.
21. Annual dividend, for three years. One dollar and fifty cents, per share.
22. Debts. None.
23. Market price of stock. Twenty-five dollars per share.

Company for erecting a Bridge over the river Susquehanna, at Nescopeck.

1. Dimensions. One thousand two hundred and fifty-six feet; breadth twenty-eight feet.
2. Number of piers and arches. Five piers and six arches.
3. Materials of piers. Structure wood, abutments stone.
4. Elevation of floor. Thirty feet.

5. Painted. No.
6. Roof. Yes.
7. Footways. None exclusively for foot passengers.
8. Cattle permitted to pass. Fifteen head.
9. Commencement and completion. Commenced in 1814, completed in 1818.
10. Where situated. The east end at the village of Nescopeck, Luzerne county; west end at the borough of Berwick, Columbia county.
11. Capital stock. Five hundred shares, amounting to fifty thousand dollars.
12. Price and number of shares. Original price one hundred dollars, number of shares five hundred.
13. Private subscriptions. Two hundred and thirty shares by individuals; none by company.
14. State subscription. Eighty shares.
15. Rate of tolls,

A loaded wagon and four horses	80 cents
A pleasure carriage and two horses	60
A single man and horse	12½
A drove of cattle per head	2
16. Number of managers. Six managers: This number is not considered too great.
17. Where place of business, and who president. In Berwick; Silas Engle, president, who resides near that place.
18. Average tolls, since authorised to be collected. One thousand four hundred and forty-nine dollars six and a half cents per annum.
19. Average tolls, for three years. One thousand one hundred and seventy-five dollars eleven and a half cents per annum.
20. Annual dividend since completed. None.
21. Annual dividend for three years. Three per cent.
22. Debts. None.
23. Market price of stock. Fifty dollars per share.

Company for erecting a Bridge over the Susquehanna river, at Wilkesbarre.

1. Dimensions. Seven hundred feet long, twenty-eight feet wide.

2. Number of piers and arches. Three piers and four arches.
3. Materials of piers. Stone, lime and sand.
4. Elevation of floor. Thirty feet.
5. Painted. No.
6. Roof. Yes.
7. Footways. None.
8. Cattle permitted to pass at one time. From five to ten.
9. Commencement and completion. Commenced in 1817, and made passable in December, 1819, roofed in 1821, planking (cross-wise) unfinished.
10. Where situated. Kingston and Wilkesbarre, in Luzerne county.
11. Capital stock. Thirty thousand dollars.
12. Price and number of shares. Fifty dollars, six hundred shares.
13. Private subscriptions. The whole number of shares were subscribed, from which has been collected \$27,135 which is all, except, say, \$300, that can be collected.
14. State subscription. Thirteen thousand dollars.
15. Rate of tolls.

A loaded wagon and four horses	75 cents
A pleasure carriage and two horses	40
A single man and horse	7
A drove of cattle per head	4
16. Number of managers. President and six managers. The number is too great.
17. Where place of business, and who president. The business of the company has been conducted both at Wilkesbarre and Kingston. The president has lately resigned in consequence of ill health.
18. Average tolls since authorised to be collected. One thousand seven hundred dollars.
19. Average tolls, for three years.
20. Annual dividend since completed. None.
21. Annual dividend for three years.
22. Debts. A variety of claims exist against the company, the whole of which will probably amount to \$18,000. On adjusting may settle to \$12,000.
23. Market price of stock. No sales.

**Company for erecting a bridge over the Susquehanna,
at the Great Bend.**

1. Dimensions. Length, six hundred feet; breadth, twenty feet.
2. Number of piers and arches. Nine piers or trussles.
3. Materials of piers. Oak timber.
4. Elevation of floor. Eight feet.
5. Painted. No.
6. Roof. No.
7. Footways. None.
8. Cattle permitted to pass at one time. One hundred head have been on it at once, passing along in a line.
9. Commencement and completion. 1814.
10. Where situated. In Susquehanna county; the village of Great Bend is at both ends.
11. Capital stock. Ten thousand dollars.
12. Price and number of shares. Fifty dollars a share, and one hundred and thirty shares.
13. Private subscriptions. Six thousand five hundred dollars.
14. State subscription. Nothing—built by individual enterprise.
15. Rate of tolls.

A loaded wagon and four horses	37½ cents.
ditto two horses	25
A pleasure carriage and two horses	37½
A single man and horse	6
A drove of cattle per head	2
16. Number of managers. One president and six managers: a committee of one superintends the repairs so that the board meets but twice a year.
17. Where place of business and who president. At the village of Great Bend Noble Trowbridge is the present president, and resides one mile north from the bridge.
18. Average tolls, since authorised to be collected. Eight hundred dollars per annum.
19. Average tolls, for three years. Eight hundred dollars.
20. Annual dividend, since completed. Ten per cent, and a small surplus fund.
21. Annual dividend, for three years. Ten per cent.
22. Debts. None.
23. Market price of stock. Thirty dollars per share.

Company for erecting a Bridge over the Tioga, at Athens.

1. Dimensions. Four hundred and fifty feet by twenty-eight.
2. Number of piers and arches. Four.
3. Materials of piers. Oak, posts planked strongly, and the interior filled with stone.
4. Elevation of floor. Twenty-six feet.
5. Painted. No.
6. Roof. No.
7. Footways. None.
8. Cattle permitted to pass at one time. No particular regulation.
9. Commencement and completion. Between May and August, 1820.
10. Where situated. Both ends in Athens township, Bradford county.
11. Capital stock.
12. Price and number of shares. Fifty dollars a share, and one hundred in number.
13. Private subscriptions. The cost of the bridge was sustained by the Athens Academy as a company, in part, and individuals for the rest.
14. State subscription. Nothing.
15. Rate of Tolls.

A loaded wagon and four horses	37½ cents.
A pleasure carriage and two horses	33
A single man and horse	6½
A drove of cattle per head	3
16. Number of managers. Four, and enough, as it is difficult to get even that number together.
17. Where place of business, and who president. Stephen Hopkins, president, and business generally done in Athens.
18. Average tolls since authorised to be collected. About ten per cent. on cost of bridge.
- 19, 20, 21, 22. Answered.
23. Market price of stock. None buying or selling.

NAVIGATION COMPANIES.

Questions submitted to the President and Managers of the Schuylkill Navigation Company.

1. What is the extent in miles of the improvements contemplated by your charter? Ninety-one miles along the road, one hundred and seventeen along the river; but this latter distance will be very much shortened by the canals—cannot say exactly how much.

2. What proportion of the distance will require canals? About fifty-nine miles of canal.

3. How many dams and locks will there probably be? About thirty-two dams, thirty-two guard locks and ninety-seven chamber locks.

4. What progress has been made in the works? Twenty-three dams are built, twenty-three guard locks, fifty-four chamber locks and about twenty-four miles of canal completed, and twenty-two miles of canal under way, to be finished by the first of November next.

5. What will be the width of, and depth of water in the canals and locks? The water in the locks will be seventeen feet wide and three feet deep; in the canals, it will vary in width from twenty to forty feet, and in depth from three to four feet.

6. In what year were the works commenced? In the year 1816.

7. In what year is it supposed they will be completed? In all the year 1823.

8. What is the date on which letters patent were granted to your company? The 2d day of September, 1815.

9. What is the amount of capital stock authorised? Five hundred thousand dollars, with power to extend it to any sum necessary to complete the work.

10. How much of this has been subscribed by individuals and companies? \$948,150.

11. How much by the commonwealth? Fifty thousand dollars, which makes the whole subscription \$998,150.

12. What portion of the whole amount subscribed has been paid in? \$589,471.

13. What was the original price and number of the shares? Each share was fifty dollars. The number certified by the commissioners to be subscribed was 2,032 shares.

14. What will be the probable rate of tolls for the whole distance, for the principal articles likely to be transported by your navigation?

The rate of tolls that may be taken is settled by law—the board of managers have not determined how much they will reduce the tolls within the legal limit.

15. How many managers conduct the affairs of the company, and who is the president, and where does he reside? Twelve managers and a president; five to be a quorum. President, Cadwallader Evans, in the city of Philadelphia.

16. At what place is the business of your company conducted? No. 8, South Seventh street, Philadelphia.

17. What dividends, if any, have been made? No dividends have been made.

18. What is the present market price of your stock? From ninety-seven to par.

19. At what points, and in what counties do your projected improvements begin and end? Begins at Sheridan's bridge, in Philadelphia county, and ends at Mill creek, in Schuylkill county.

20. How many feet falls will your works, when completed, have overcome? About six hundred and ten feet.

21. What is the expected cost of the whole improvements? From \$950,000 to \$1,000,000.

22. What are the principal towns near which your navigation passes? Norristown, Pottstown, Reading and Hamburg.

Union Canal Company.

1. What is the extent in miles of the improvements contemplated by your charter? Seventy-one miles.

2. What proportion of the distance will require canals? Nearly all.

3. How many dams and locks will there probably be? This question cannot be answered till further surveys are made. The descent to the Schuylkill is 300, and to the Susquehanna 210 feet, from the summit level.

4. What progress has been made in the works? The canal, on the summit level, laid out and the execution of the work contracted for.

5. What will be the width of, and depth of the water in the canals and locks? Five feet deep on the summit, twenty-five feet wide at bottom and forty feet at water line.

6. In what year were the works commenced? In 1821, by the present company.

7. In what year is it supposed, that they will be completed? In 1825.

8. What is the date on which letters patent were granted to your company? Thirtieth May, 1811.

9. What is the amount of capital stock authorised? Five hundred thousand dollars by the present company.

10. How much of this has been subscribed by individuals and companies? 2,250 shares or \$450,000.

11. How much by the commonwealth? Two hundred and fifty shares or \$50,000.

12. What proportion of the whole amount subscribed has been paid in? Ten per cent. or twenty dollars on each share.

13. What was the original price and number of shares? Two hundred dollars.

14. What will be the probable rate of tolls, for the whole distance, for the principal articles likely to be transported by your navigation? As low as possible.

15. How many managers conduct the affairs of the company, and who is the president, and where does he reside? Twelve managers, Samuel Mifflin, president, Philadelphia.

16. At what place is the business of your company conducted? Philadelphia and Lebanon.

17. What dividends if any, have been made? None, the work being in no part complete.

18. What is the present market price of your stock? Par.

19. At what points, and in what counties do your projected improvements begin and end? Commences on the Susquehanna, at or near the mouth of the Swatara, in Dauphin county, to pass through Lebanon and Berks counties, to the Schuylkill, at or near the mouth of the Tulpehocken.

20. How many feet of falls will your works, when completed, have overcome? Five hundred and ten.

21. What is the expected cost of the whole improvements? From 800,000 to one million.

22. What are the principal towns near which your navigation passes? Middletown, Hummelstown, Millerstown, Lebanon, Myerstown, Womelsdorf.

Monongahela Navigation Company.

1. What is the extent in miles of the improvements contemplated by your charter? From Pittsburg to the Virginia line—about ninety miles.

2. What portion of the distance will require canals? Not fully ascertained.

3. How many dams and locks, will there probably be? If that mode of improvement is adopted, about twenty.

4. What progress has been made in the works Not yet completed. (Expenditure about \$500.) In the summer of 1821, a channel was commenced at the Brownsville ripples.

5. What will be the width of, and depth of the water in the canals and locks? About forty feet, and depth about three feet.

6. In what year were the works commenced? In 1821.

7. In what year is it supposed, that they will be completed? If the lock and dam plan is pursued, it will require several years; but if the law is so modified as to allow the plan to be varied as commissioners may think best, it may be done in a much less time.

8. What is the date on which letters patent were granted to your company? On the third day of July, 1819.

9. What is the amount of capital stock authorised? Ninety thousand dollars.

10. How much of this has been subscribed by individuals and companies? Eighteen thousand three hundred and sixty dollars.

11. How much by the commonwealth? Thirty thousand dollars.

12. What proportion of the whole amount subscribed has been paid in? Eight thousand and sixty dollars.

13. What was the original price and number of shares? Thirty dollars.

14. What will be the probable rate of tolls, for the whole distance, for the principal articles likely to be transported by your navigation? So inconsiderable that we do not feel authorised to name any thing.

15. How many managers conduct the affairs of the company, and who is the president, and where does he reside? There is ten managers and a president. The president is William Ewing, Esq. who resides in Luzerne township, Fayette county, Pennsylvania.

16. At what place is the business of your company conducted? At Brownsville.

17. What dividends, if any, have been made? None, nor need any be expected for many years.

18. What is the present market price of your stock? Unknown.

19. At what points, and in what counties do your projected improvements begin and end? At Pittsburg, in Allegheny, and at the Virginia line, in Fayette and Greene counties. Washington and Westmoreland counties also border on the river in the distance.

20. How many feet of falls will your works, when completed, have overcome? Not exactly ascertained, but suppose about sixty. For information refer you to the report of the commissioners.

21. What is the expected cost of the whole improvement? That depends on the mode of improvement. If the lock and dam plan is adhered to, it will require the capital contemplated by the law, of ninety thousand dollars; but if the slope principle is adopted, the third of that sum is considered sufficient.

22. What are the principal towns near which your navigation passes? Pittsburg, M'Keesport, Williamsport, Brownsville and New Geneva.

Conestogo Navigation Company.

1. What is the extent in miles of the improvements contemplated by your charter? About eighteen miles is covered by the charter. The application was for about forty-six miles.

2. What proportion of the distance will require canals? The whole would be a slack water navigation.

3. How many dams and locks will there probably be? Taking it throughout, they would average about one mile and a half.

4. What progress has been made in the works? None but taking a level of twelve miles, in which the ascent was sixty feet.

5. What will be the width of, and depth of the water in the canals and locks? The width of the Conestogo.

6 and 7. When commenced, and when completion expected? The level was taken in 1820: the charter requires alteration to make it answer the purpose.

8. What is the date on which letters patent were granted to your company? The act passed in 1820.

9. What is the amount of capital stock authorised? As the corporation is sole, the capital is not prescribed.

10. How much of this has been subscribed by individuals and companies? None.

11. How much by the commonwealth? None.

12. What proportion of the whole amount subscribed has been paid in? It is individual.

13. What was the original price and number of shares? Answered above.

14. What will be the probable rate of tolls, for the whole distance, for the principal articles likely to be transported by your navigation? Wholly uncertain, as that will depend upon the expense.

15. How many managers conduct the affairs of the company, and who is the president, and where does he reside? Answered above.

16. At what place is the business of your company conducted? answered above.

17. What dividends, if any, have been made? Answered.

18. What is the present market price of your stock? Answered.

19. At what points, and in what counties do your projected improvements begin and end? In Lancaster county.

20. How many feet of falls will your work, when completed, have overcome? The act of incorporation will cover about seventy.

22. What is the expected cost of the whole improvements? Uncertain.

22. What are the principal towns near which your navigation passes? It would lead to Lancaster from the Susquehanna.

Conawago Canal Company.

1. What is the extent in miles of the improvements contemplated by your charter? The canal is a private individual undertaking, and including the dams, it is a mile and a quarter in length.

2. What proportion of the distance will require canals? Answered above.

3. How many dams and locks will there probably be? There are two dams; the inner one eight hundred feet, the outer one five hundred feet. One guard lock and three ascending and descending locks—each 110 feet in length, eighteen feet wide and seven feet deep.

4. What progress has been made in the works? They are completed.

5. What will be the width of, and depth of the water in the canals and locks? The canal is forty feet wide and four feet deep. The residue is answered above.

6. In what year were the works commenced? In 1814.

7. In what year is it supposed, that they will be completed? Finished.

8. What is the date on which letters patent were granted to your company? The whole is my individual property. The right to lead off the water is granted by a special act of assembly.

9. What is the amount of capital stock authorised? Answered above.

10. How much of this has been subscribed by individuals and companies? Answered above.

11. How much by the commonwealth? Answered above.

12. What proportion of the whole amount subscribed has been paid in? Answered above.

13. What was the original price and number of the shares? Answered above.

14. What will be the probable rate of tolls, for the whole distance, for the principal articles likely to be transported by your navigation? The tolls have acquired no permanent character. They are in experiment and will probably be fixed by the experience of the spring.

15. How many managers conduct the affairs of the company, and who is the president, and where does he reside? Answered above.

16. At what place is the business of your company conducted? Being under my own direction, the business is transacted by agents on the spot.

17. What dividends, if any, have been made? Answered above.

18. What is the present market price of your stock? Answered above.

19. At what points, and in what counties do your projected improvements begin and end? It begins and ends in Lancaster county.

20. How many feet of falls will your works, when completed, have overcome? Twenty-one feet

21. What is the expected cost of the whole improvements? About one hundred and twenty thousand dollars.

22. What are the principal towns near which your navigation passes? None.

Extract from the Senate Journal, March 25, 1822.

"A motion was made by Mr. Raguet and Mr. Cadwallader, and read as follows, to wit:

Resolved, That the clerk of the Senate be directed to arrange for publication, the documents which accompanied the report of the committee on Roads, Bridges and Inland Navigation, on the 22d instant, consisting of the answers to the questions submitted by that committee to the president and managers of the several road, bridge and navigation companies throughout the commonwealth, and that twelve hundred copies of the same be printed in pamphlet form, and distributed amongst the members of both branches of the legislature, with the law and journals, in the proportions usually observed in the distribution of documents, reserving a sufficient number for the use of the two Houses, and for the public offices."

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